PUBLIC AND ACTIVE TRANSPORTATION BEST PRACTICES IN REMOTE AND COLD-CLIMATE JURISDICTIONS

Report No. 1 07 1234.AB August 31, 2023

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Presented to:

Climate Change Secretariat
Government of Yukon Department of Environment
Climate Change Secretariat

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1. INTRODUCTION

The Government of Yukon is committed to reducing the Yukon's emissions to 45 per cent below 2010 levels by 2030. This is one of four goals in Our Clean Future: the Yukon strategy for climate change, energy, and a green economy (OCF). In this 10-year strategy, the Government of Yukon, alongside First Nations and municipal partners, sets commitments to reduce territory-wide emissions and adapt to the impacts of climate change.

In 2020, 49 per cent of the Yukon's emissions come from road transportation, roughly half of which are estimated to be from personal vehicles. An essential path to reduce transportation emissions is expanding the infrastructure and access to public and active transportation. A joint target laid out in OCF and the City of Whitehorse's 2014 Transportation Demand Management Plan is to reduce the percentage of commuting trips in Whitehorse made by drivers in single occupant vehicles from 75 per cent in 2011 to 55 per cent by 2031 and 50 per cent by 2036. While no specific public and active transportation targets have been set for communities outside of Whitehorse, supporting public and active transportation infrastructure and access throughout all of Yukon's communities is vital to decreasing transportation emissions as a whole.

Several territorial-led initiatives and commitments have been made pertaining the Government of Yukon's support to local and First Nations governments towards transitioning to a more sustainable and equitable transportation system. Notable commitments and initiatives by the Government of Yukon include:

- Developing detailed guidelines by 2025 that can be used by local governments to develop walkable, bike-friendly, and transit-oriented communities. [Department of Environment]

- Continue to support municipalities and First Nations to make investments in public and active transportation infrastructure [Department of Community Services]

- Developing Yukon-specific design guidance and a plan for active transportation facilities by 2024 to guide investments in active transportation infrastructure into corridors near communities. [Department of Highways and Public Works]

- Establishing the Yukon Climate Leadership Council to provide recommendations on how to further advance local and FN communities' vehicle GHG emission targets.

To continue finding better ways to support local communities, the Government of Yukon is interested in learning from other jurisdictions nationally and internationally regarding policies, legislation, programs, initiatives, and inter-jurisdictional mechanisms that have proved effective in supporting local implementation of public and active transportation improvements. Given the unique context and priorities of each municipal and First Nation government, this study wants to avoid a prescriptive, 'one-size-fits-all' approach, and instead focus on improving the government's capacity to support transportation initiatives that municipal and First Nation governments identify as priorities.

The overarching objective of this study is to scan and build upon best practices on effective public and active transportation policies and programs for small, remote, cold-climate communities that can inform the Government of Yukon on how to continually support local municipalities in the

pursuit of a more sustainable and equitable transportation system. The findings of this work will support the following committed to and recommended objectives:

- Increase the use of public and active transportation. (Our Clean Future objective)
- Reduce Yukon's road transportation emissions by reducing Yukoners' reliance on cars. (Our Clean Future objective)
- Design our communities to be low-carbon and resilient to the impacts of climate change. (Our Clean Future objective)
- Supporting access to comfortable, accessible, equitable, low- or no-carbon transportation alternatives that align with community priorities. (Yukon Climate Leadership Council objective)

The report has been organized in seven main chapters. **Chapter 2** is intended to set the stage with an overview of the national transportation governance framework and national strategies including a general review of the statutory role of all three levels of government in transportation planning. **Chapter 3 and 4** follow with a closer look at the role of Provincial (States in the US) and Territorial Governments in guiding or supporting municipalities' public and active transportation systems, looking at notable experiences in Quebec, Ontario, British Columbia, and the US. **Chapter 5** includes a jurisdictional review of specific case studies generally recognized as best-practices in small, remote, cold-climate communities including cases in Canada, the US, and Europe. Having looked outwards in Chapters 1 through 4, **Chapter 6** looks inwards into The Yukon Transportation Policy context, highlighting the most important key policy guiding documents and related public and active transportation needs and commitments in the Territory. **Chapter 7** includes a broad review of key local municipalities focusing on local policy documents and a scan review of public and active transportation networks and local needs including recommendations for potential opportunities for improvements. **Chapter 8** is the final chapter, intended to reconcile key findings and principles uncovered throughout the study, and to provide a suite of potential guidance structures for developing walkable, bike-friendly, and transit-oriented communities in the Yukon. Guidance recommendations are categorized at Territorial, Regional, and Local government level. Where appropriate, chapters throughout the study, include 'Key Take-aways summary sections.

2. POLICY CONTEXT

2.1 Transportation Governance in Canada

Transportation in Canada is a shared responsibility among the federal, provincial, and municipal levels of government. The roles of the federal and provincial governments are defined in the Constitution Act of 1867. In general, the federal government has the constitutional authority to oversee international and inter-provincial transportation, while the provincial governments are responsible for intra-provincial transportation. Municipalities are largely responsible for community planning, design, and implementation of transportation infrastructure and services.

Table 1. Scope of Involvement in Active Transportation (adapted from 2018 Active Transportation: A Survey of Policies, Programs and Experience)

Level of Government / Organization	Scope of Involvement in Active Transportation	Areas of Focus
Federal Government	Program design, funding	Public Health
Provincial /Territorial Government	Policy development, project implementation, outreach, infrastructure maintenance, funding, research, program design	Road safety, recreation, tourism, air emissions, public health
Municipal Government	Policy development, project implementation, outreach, infrastructure maintenance	Recreation, tourism
Non-profit Organizations	Outreach, awareness and promotion	Public health
Transit Providers	Policy development, project implementation, infrastructure maintenance, funding	Air emissions, safety, congestion

Inter-jurisdictional collaboration for public and active transportation planning in Canada involves the collaborative efforts between different levels of government, including federal, provincial/territorial, regional, and local municipalities, to develop and implement public and active transportation initiatives and infrastructure that span multiple jurisdictions. In practice, the efficient operation and regulation of Canada's transportation system relies on the close collaboration of all parties to help ensure safety, efficiency, environmental sustainability, and security. Key aspects of inter-jurisdictional public and active transportation planning in Canada:

- National Strategies and Funding: The federal government plays a role in supporting public and active transportation through national strategies and funding programs. For example, the federal government has developed the National Active Transportation Strategy and implemented initiatives like the Active Transportation Fund, which provides guidance and funding for active transportation infrastructure projects across the country.

- Provincial/Territorial Coordination: Provinces and territories often take the lead in public and active transportation planning within their jurisdictions. They develop their own policies,

strategies, and funding programs to support public and active transportation and collaborate with municipalities and other jurisdictions within their respective provinces/territories.

- Regional Planning Partnerships: Different municipalities within a region or metropolitan area often work together through regional planning partnerships (i.e., Metro Vancouver, Edmonton Metropolitan Regional Board, Calgary Regional Partnership) or organizations (i.e. Translink, Metrolinx) to develop coordinated public and active transportation plans. These partnerships facilitate cooperation, information sharing, and coordination of efforts to create a cohesive active transportation network.

- Cross-Jurisdictional Infrastructure: Inter-jurisdictional public and active transportation planning involves identifying key transportation corridors that cross municipal, provincial, or territorial boundaries and developing infrastructure that seamlessly connects these areas. This can include shared-use paths, cycling lanes, and pedestrian-friendly facilities (i.e., Trans Canada National Trail, La Route Verte du Quebec, Galloping Goose Regional Trail, BC.)

- Data Sharing and Best Practices: Inter-jurisdictional public and active transportation planning benefits from data sharing and the exchange of best practices among different levels of government. Sharing data on public transit and cycling and walking patterns, safety, and infrastructure usage helps inform decision-making and identify regional priorities.

- Policy Alignment and Standards: Inter-jurisdictional planning involves aligning policies, regulations, and design standards across different levels of government. This helps create consistency in active transportation infrastructure design and ensures that planning decisions are integrated and complementary.

- Collaboration on Funding Opportunities: Collaboration between different levels of government, NGOs and private sector helps leverage resources and secure funding for regional active transportation projects. By working together, governments and stakeholders can access funding programs and grants that support active transportation infrastructure development.

Inter-jurisdictional active transportation planning in Canada recognizes the importance of coordination, cooperation, and information sharing among federal, provincial/territorial, and municipal entities. By working together, governments can create connected, safe, and accessible public and active transportation networks that promote sustainable transportation choices and enhance the quality of life for Canadians.

2.1.1 Transport Canada

Canada's multi-modal transportation system consists of several strategic assets and networks that span all regions of the country. Transport Canada is the department within the Government of Canada responsible for developing regulations, policies, and services of road, rail, marine and air transportation in Canada. It is part of the Transportation, Infrastructure and Communities portfolio. The department was created in 1935, and it has since been responsible for regulating and

overseeing all modes of transportation within Canada's borders. See **Appendix A** for summary details on Transport Canada's mandate, organizational structure and key functions.

2.1.2 Provinces and Territories

Canada's provinces and territories have primary jurisdiction over land use planning. Land use plays a key role in the long-term sustainability of transportation. Modal share by public transit can be increased and total demand for all modes of motorized transportation can be reduced through careful urban design and a more compact, mixed-use urban form. In general, provinces establish land use policies and vest most responsibilities for planning and implementation at the municipal level.

Provincial and Territorial governments play a major role in transportation decision-making. Capital and maintenance costs of road infrastructure and public transit, the registration and licensing of vehicles, fuel taxes, safety, policing, and regulation of the insurance industry are all provincial responsibilities.

Some provinces have embarked on provincial-wide public and active transportation strategies and programs. Sections 3.0 and 4.0 discuss some notable examples.

2.1.3 Regional and Local Municipal Governments

Regional and municipal governments are key players in efforts to achieve sustainable transportation.

Walking, cycling, and other active transportation infrastructure are typically the exclusive domain of municipal governments. Approximately 70 per cent of all sidewalks in Canada are owned by urban municipalities, along with at least 12,000 km of cycle routes and bikeways[1].

Regional and local municipalities are also enabled by Provincial and Territorial governments to enact (enabling) legislation and bylaws to shape land use planning to encourage higher density mixed-use and more connected and accessible communities that can make a long-term contribution to sustainable transportation.

Municipalities can undertake sound land-use planning practices, such as densification around public transit hubs, tools to attract infill development, conservation of natural areas, enhancement of agricultural zones and urban agriculture, and strategies to include social and affordable housing.

Municipalities may also coordinate their own growth management efforts at the regional level. The Federation of Canadian Municipalities co-sponsors the 20% Club, in which 30 Canadian municipalities have committed to actions, and aimed at reducing greenhouse gas emissions by at least 20 percent from 1990 levels. Reductions in transportation emissions are included in these municipal plans.

[1] https://imfg.munkschool.utoronto.ca/report/transportation/#intergovernmental-cooperation

In 1996, the Transportation Association of Canada published an Urban Vision Sampler, which highlights sustainable transportation efforts by 12 regional and city governments. These diverse municipal efforts generally relate to:

- traffic demand management;
- public transit services;
- cycling infrastructure;
- pedestrian infrastructure;
- parking policies; and
- the “greening” of municipal fleets.

Among the most notable examples of regional government strategies guiding public and active transportation, Ontari and BC showcase some worth noting plans:

- Durham Regional Cycling Plan 2021
- Translink Regional Cycling Strategy
- West Coast Cycling Network Plan – October 2019 – Alberni-Clayoquot Regional District (ACRD)
- Strategic Cycling Network Development – Niagara Region
- Pedestrian & Cycling Master plan – Victoria Capital Regional District (CRD)
- York Region Pedestrian & Cycling Development Plan
- Regional Cycling Master Plan – Waterloo Region, ON.

For First Nations communities, the Umbrella Final Agreement (UFA) which was finalized in 1990, provides a framework for final claim settlement agreements with each of the Yukon’s 14 First Nations (11 of 14 currently have a signed Final Agreement).

The UFA is a framework for negotiating individual final agreements between the Government of Canada, the Government of Yukon, and the Council of Yukon First Nations. It was signed on May 29, 1993, and provides a comprehensive outline of First Nations governments’ rights to land, self-governance, economic development, resources, and much more.

The UFA is constitutionally protected modern treaties that outline First Nations’ rights within their traditional territories. Eleven of the fourteen Yukon First Nations have Final Agreements with the Government of Canada and the Government of Yukon. These agreements describe how the federal, territorial, and First Nations governments interact with each other and define First Nations ownership of and decision-making powers on Settlement Land. The Final Agreements address heritage, fish, wildlife, natural resources, water, forestry, taxation, financial compensation, economic development, and land management.

Under the UFA, the Yukon Land Use Planning Council (YLUPC) was created. It’s made up of representatives from Canada, Yukon and the Council of Yukon First Nations, and makes recommendations on policies, goals, priorities, timeframes and boundaries for land use planning.

YLUPC serves a vital role in advising the Government of Yukon and First Nations on a diverse range of subjects, notably encompassing land use planning policies and objectives. The council assumes the responsibility of proposing overarching terms of reference, essential guidelines that outline the parameters for action. Furthermore, the YLUPC undertakes the task of designating planning regions and establishing priorities for regional land use planning commissions. This

intricate process ensures the coherent development of land use plans tailored to specific areas, thus reflecting the unique requirements and preferences of each region.

2.2 The National Active Transportation Strategy

In March 2021, the Federal Government initiated Canada's First National Active Transportation Strategy Framework. The framework was broken down into six elements to create the A-C-T-I-V-E framework consisting of awareness, coordination, targets, investment, value, and experience – which served as a guiding federal framework for public engagement on the development of Canada's first National Active Transportation Strategy.

Simultaneously with the launching of the National Active Transportation Strategy, the Government announced the Active Transportation Fund, the first dedicated fund supporting the expansion and enhancement of active transportation infrastructure across Canada. The Active Transportation Fund will provide $400 million over five years. Municipal governments, local and regional governments such as service districts, and Indigenous organizations are eligible recipients for the Active Transportation Fund. Provinces, territories, and not-for-profit organizations are also eligible in specific circumstances.

Application scope can include both capital projects (multi-use pathways, bike lanes, footbridges across roadways, new lighting, and wayfinding signage, etc.) and soft costs for planning and design as well as education and outreach programs.

It is worth noting that a renewed emphasis on social equity in the Active Transportation Fund. A minimum of 10% of the total funding envelope has been allocated for Indigenous recipients to ensure Indigenous communities have access to the Fund. Additionally, Indigenous communities may receive up to 100% of eligible project costs for capital projects that encourage increased active transportation. Recent examples of Indigenous-led active transportation projects funded:

- New 1km sidewalk on Tait Avenue (Nisga'a Village of Gitlaxt'aamix, BC). $1,121,750 awarded.
- Witset Canyon Connection project, a multi-use pathway along Highway 16 (Wiset First Nation, BC). $380,730 awarded.
- Pathway with solar-powered lighting connecting Sus Avenue to William Konkin Elementary School in the Village of Burns Lake (Lake Babine Nation, BC). $258,000 Awarded.

The Active Transportation Fund is built on past and existing programs that also support growing active transportation in communities across the country:

- Investing in Canada Infrastructure Program (ICIP)
- Active Transportation Fund (ATF)
- Canada Healthy Communities Initiative (CHCI)
- Canada Community-Building Fund
- Natural Infrastructure Fund
- Disaster Mitigation and Adaption Fund (DMAF)
- Permanent Public Transit Program
- New Building Canada Fund – Small Communities Fund

Shortly after the launch of the framework, engagement sessions were hosted between the federal governments and key stakeholders including provinces, territories, Indigenous communities,

municipalities, not-for-profits and more so to discuss ways for the federal government to support on active transportation policy and infrastructure. Key takeaways include:

- Overall desire for safer, more accessible, and more equitable active transportation from coast-to-coast-to-coast.
- The need for better application guides
- More streamlined funding for smaller projects
- Opportunities for planning studies to be eligible project costs.
- The need to better support collaboration and information sharing between communities.
- Focus on equitable access for rural, remote, and equity-deserving communities.

The National Active Transportation Strategy acknowledges that active transportation policy weaves through the jurisdictional responsibility of all orders of government. Therefore, coordination of planning, design, regulations, standards, and active transportation investments across levels of government, Indigenous communities, not-for-profits, and the private sector is essential for advancing active transportation on a national scale.

2.3 National Transit Strategy

Despite several years of advocacy from a variety of stakeholders, Canada does not have a comprehensive national transit strategy. Instead, the federal government has implemented several elements of different proposals, including:

- Significant infrastructure funding for transit and other green initiatives
- Recent announcement of the Permanent Transit Fund (2026)
- Electric bus deployment support
- Rural Transit Solutions Fund and Active Transportation Fund, in advance of the launch of the Permanent Transit Fund.

For the most part, these funds cover eligible capital costs only, and in many cases require provincial or local municipal participation. While planning studies are typically part of the eligible costs, on-going operating funds are not. The only exception to this pattern was the Safe Restart program, which provide significant funding to make up revenue shortfalls resulting from the pandemic. This program has now expired.

Several stakeholders have proposed strategies that are both similar to each other, and include elements of the current plans, including:

- Canadian Urban Transit Association (CUTA)[i]
  - National Transit Strategy Proposal (2005) – advocated for permanent transit funding in both capital and operating expenditures.
  - COVID-19 Recovery Strategy (2020)[ii]

- Federation of Canadian Municipalities (FCM)[iii]
  - Building Better Lives Together Plan (2019) – advocated for permanent, predictable funding in the order of three to four billion dollars annually, with direct allocation to transit agencies,

rather than through the provinces. The plan also advocated for incentives for zero emission bus acquisition and deployment.

So, while many of the parts of advocates' proposals are included in current policies and programs, and the federal government is providing unprecedented capital funding for transit initiatives, there is still not a comprehensive strategy that might include elements such as:

- Consistent support among provinces and territories
- Integration and accessibility elements
- Land use planning initiatives
- Operating funding support

2.4 Key Take-aways

- Canada's transportation system relies on inter-jurisdictional and inter-governmental collaboration especially when it comes to public and active transportation projects, yet in practice, the mechanisms, processes, and framework for collaboration appear non-biding (advisory), unclear or not well defined.

- Regional mandates appear weak and often rely on strong municipal leadership and political willingness to collaborate and partner with neighbouring municipalities. Even best-case examples in Canada have taken long time to be consolidated.

- Territorial and Provincial Governments may be in the best position, among all levels of governments, to catalyze federal programs, and align local, regional, and national goals and strategies. Key roles to play, as evidence from best cases, including developing Provincial and Territorial strategies, facilitating regional partnerships, identifying, and funding cross-jurisdictional infrastructure and corridors, dissemination of best practices for local planning, design, and data sharing.

- There is no comprehensive National Transit Strategy in Canada, though the structure of capital funding programs is used to advance several relevant policy objectives (transit electrification, for example).

- The recent National Active Transportation Strategy and funding program, although in its infancy, has already set the stage for more formal inter-jurisdictional collaboration while directly supporting local and regional AT infrastructure projects across Canada.

3. ROLE OF PROVINCE AND TERRITORIES IN PUBLIC TRANSIT

Provincial and Territorial governments play a major role in transportation decision-making. Capital and maintenance costs of road infrastructure and public transit, the registration and licensing of vehicles, fuel taxes, safety, policing, and regulation of the insurance industry are all provincial responsibilities.

The federal and provincial governments oversee long-distance transportation, while municipalities are responsible for public transit, active transportation, and local highways and roads.

This section provides an overview of transit strategies at the provincial and territorial level, with policy and guidance examples. Details of specific funding programs are included in the next section.

Table 2. Summary of Provincial and Territorial Public Transit Programs

Province	Comprehensive Policy	Participates in Federal programs	Urban Transit capital funding	Urban Transit operating funding	Supports rural / community programs
Newfoundland and Labrador	No	Yes	Yes	No	
Prince Edward Island	No	Yes	Yes	No	Yes
New Brunswick	No	Not fully	Yes	No	No
Quebec	Yes	Yes	Yes	Yes	Yes
Ontario	GTHA	Yes	Yes	Yes	Yes
Manitoba	No	Yes	Yes	No	Yes
Saskatchewan	No	Yes	Yes	No	Yes
Alberta	No	Yes	Yes	No	Yes
British Columbia	Yes	Yes	Yes	Yes	Yes
Yukon	No	Yes	Yes	No	Yes
NWT	No	Yes	Yes	No	Yes
Nunavut	No	No	No*	No*	Yes

*_No urban transit service.

3.1 Policy and Guidance examples

3.1.1 Quebec

Quebec's most recent policy program is described in the report: Transporting Quebec Towards Modernity: Sustainable Mobility Policy / 2030 Urban Transit Intervention Framework.[iv]

The plan outlined 20 interventions designed to address specific issues, including:

- Service Improvements

  - Funding to allow municipalities to increase service offerings by five percent per year through 2023.
  - Transit priority projects, including reserved lanes and signal priority treatments.
  - Operating cost supports (on-going)
- Infrastructure support
  - Electrification support
  - Updated planning processes to maximize effectiveness and efficiency and ensure effective decision-making regarding selection and integration of transit modes.
- Governance
  - Monitoring revised governance structure in Montreal Region
  - Support for regional governance development
- Accessibility
  - Universal Access working group
  - Accessibility target setting
- Funding
  - Mobility and economic development tools study
  - Integrated planning process improvements – consideration of multi-modal implications in all transportation capital project planning
  - Revised operating funding program to support maintenance, service development and optimization.
  - Revised funding programs to encourage asst management
- Transit-Oriented Development
  - Transit mode decisions based on density thresholds
  - Transit-focussed urban development planning
  - Conditional funding
  - Public building location guidelines

Many of the elements of Quebec's plan have had implementation affected by the pandemic, however, there is evidence that implementation is resumed, including for example, the unofficial announcement of the purchase of 1,500 Zero-emission buses over five years for deployment around the province.

3.1.2 Ontario

While Ontario does not have a comprehensive province-wide plan, the Regional Transportation Plan (RTP) for the Greater Toronto and Hamilton Area (GTHA) outlines a regional plan for transit development through 2050, in conjunction with provincial land use policies.

Since 2004, the province has also maintained the provincial gas tax program[v], dedicating two cents per litre from provincial gasoline sales to public transit. This fund, typically in the range of 325 to 375 million dollars annually, is allocated to all municipalities in the province that operate a transit system, based on a population and ridership formula.

The province also supports community-based systems through the Community Transportation Grant Program[vi], including capital funding and full operating support through 2025.

The province has also participated in the federal infrastructure program, as well as dedicated provincial funds for major infrastructure projects.

3.1.3 British Columbia

British Columbia has the most comprehensive provincial transit policy in the country, with province-wide capital and operating funding, administered through BC Transit. BC Transit funds Victoria Regional Transit for the capital region and a host of Regional Transit systems covering all areas of the province outside of the Greater Vancouver Regional District, which is governed by TransLink.

Regional transit services[vii] are provided through a partnership between BC Transit, local government, and a contracted transit operating company. Regional transit system service levels and budgets are approved each year by local government, who also set fares and local property taxes to pay their contribution of transit costs. This partnership is formalized through series of agreements: a Transit Service Area Agreement, Master Operating Agreement (MOA) and an Annual Operating Agreement (AOA). The AOA is renewed on an annual basis.

In Victoria, transit services are governed by a separate commission, responsible for setting routes, service levels, fares and local taxes for transit purposes. It is responsible for reviewing and raising the municipal share of funding to complement provincial funding.

3.1.4 Other Policy Guidance

Social Sciences and Humanities Research Council (SSHRC)- Navigating rural: place-based transit solutions for rural Canada[viii]

This report was part of SSHRC's "Imagining Canada's Future" project and focuses on mobility and urban transit.

The report identifies several barriers to providing transit solutions in rural communities, including:

- Demographic factors and ridership
- Sociocultural aspects of transit
- Natural and built environment
- Local costs of operation and potential sources of revenue
- Local governance
- Local economic structure
- External funding programs

The report includes a database of rural and community-based programs[ix] and identifies a variety of policy implications. The report notes that rural communities and regions must:

- Recognize what unique place-based barriers exist locally.
- Recognize and leverage existing assets and resources.
- Recognize unique local characteristics and needs.
- Establish a transit service that makes the most sense based on the above. For many rural communities this means something other than a traditional fixed-route system.

Further, the report recommends that specific policies to be developed to enhance public transit must:

- Recognize that policies and programs based on the existing knowledge base are limited and unable to account for the diversity of rural contexts.
- Recognize that the dominance of specific regions, community types and transit system types leave out experiences, considerations, and opportunities relevant to other types of rural communities.
- Apply a rural lens (rural considerations) to help develop programs and policies but recognize the impact of data and information gaps.
- Be flexible in rural transportation policies and programs to ensure diverse rural transit types are supported, both within a community and between communities.

Generally, it is important for communities, and decision makers to:

- Change perceptions of existing or potential users, making transit a viable and socially desirable option.
- Recognize the full benefits of transit, going beyond the simple cost to operate and return on investment to include the impact to measures of well-being and social, economic and environmental co-benefits.

Northern Alberta Development Council- Developing Sustainable Transit Options For Small Communities – A summary of Best Practices[x]

This report prepared by the NADC for the Town of Peace River examines transit options and strategies for small communities (population 5,000 to 50,000). It draws on Canadian Urban Transit Association data and a report prepared by Transport Canada: 'Improving Travel Options in Small and Rural Communities'

The report re-iterates Transport Canada's advice in establishing four Principles for Action*:

> *Take an Integrated, Strategic Approach*
>
> *Developing a strategic plan can motivate and guide decision-making. It can also bring together relevant community members to identify collective goals, resources, challenges and opportunities. By following this approach, communities are able to cut across silos of responsibility within municipal governments and bring together government, not for profit and private sector interests.*
>
> *Consider the Triple Bottom Approach*
>
> *Instead of the conventional focus on economic bottom lines, rural municipalities are encouraged to consider a 'triple bottom line' which gives equal weight to economic, social and environmental outcomes. Transportation, as a municipal responsibility having extensive impacts on social and environmental systems in addition to economic effects, is a particularly important area for triple bottom line analysis. Practitioners should view transportation projects as more than line items in a budget—they should weigh the municipal*

* This section is drawn directly from the NADC report (p. 4-5) and paraphrases the Transport Canada report Section 1.3 p. 7-8).

savings and expenses against the benefits and costs to individuals, families, neighbourhoods, businesses and the ecosystem. By doing so, they can better inform decision-makers of the pros and cons of either approving or rejecting an initiative—and decision-makers, in turn, become more accountable to the public.

Balance Supply and Demand

Communities have been using measures that manage the demand for transportation, rather than simply focusing on the supply. Transportation Demand Management (TDM) is the application of strategies and policies to reduce travel demand of single-occupancy private vehicles. TDM measures influence whether, why, when where and how people travel. Municipal TDM initiatives can include educational and promotional tools, incentives, and disincentives. They include measures like information campaigns, special events, discounted transit fares, public ride-matching services, active and safe routes to school programs for children, workplace-based commuting options programs, and household-based individualized marketing. TDM measures often involve partnerships between municipalities and employers, schools, and community organizations. They are typically less costly than infrastructure solutions but improve the cost-effectiveness of those solutions by increasing their levels of use.

Focus on Priorities

There are a great many actions that can be taken by smaller communities to improve travel options for different groups of people. Well-designed pilot projects can gain positive media coverage, attract new supporters and overcome opponents' skepticism. When communities focus their initial efforts on a small number of priorities and ensure their success, transit plans gain momentum as well as community buy-in for additional actions. Ultimately, individual communities need to decide whether they would be better off with incremental action that strengthens existing transportation services or create something new and innovative. (Northern Alberta Development Council 2000, 7–8)

Transit Cooperative Research Program (US) - Innovative Rural Transit Services[xi]

TRB's Transit Cooperative Research Program (TCRP) Synthesis 94: Innovative Rural Transit Services highlights transit and rural intercity bus service responses to changing rural community transportation needs. The report includes an emphasis on the innovative and/or entrepreneurial spirit, the innovator, and the conditions required for innovation.

3.2 Scan of Public Transit Networks

Several jurisdictions combine area transit systems planning on a regional basis to help ensure integrated decision making.

3.2.1 Greater Vancouver Regional District (GVRD)

The GVRD comprises 21 municipalities plus one First Nation, located within the Vancouver Area. Transit service for the Region is provide by the South Coast British Columbia Transportation Authority, operating as TransLink.

The purpose of the Authority is to provide a regional transportation system for people and goods, and to support regional growth strategies, provincial and regional environmental objectives, and overall economic development.

TransLInk governance is provided by a Board of Directors and the Mayors Council on Regional Transportation. Members of the Board of Directors are appointed by the Mayors' Council, on the advice of a Screening Panel, which is established annually to recruit potential candidates.

While TransLink is responsible for transit service delivery throughout the region, it is also responsible for all major transportation project and goods movement initiatives.

TransLink has expropriation and taxation powers, including taxes and levies, tolls, development charges, motor vehicle charges and user fees.

3.2.2 Greater Toronto and Hamilton Area

Metrolinx, an agency of the Ontario government, was created in 2006 (by the *Metrolinx Act, 2006*). Their mission is to "champion, develop and implement an integrated transportation system that enhances prosperity, sustainability and quality of life."

Metrolinx owns and operates GO Transit, the Union Pearson Express and the Presto fare management system.

Metrolinx is governed by a Board of Directors, appointed by the Province. The Board is responsible for setting Metrolinx's strategic direction, identifying, managing, and monitoring key risks, as well as providing oversight to operations.

Metrolinx is responsible for operating commuter bus and rail operation through the region, while municipal urban transit remains the responsibilities of the local municipalities. All transit systems in the region (plus OC Transpo) use the Presto fare system as a condition of receiving provincial gas tax funding.

Metrolinx is also now responsible for most major infrastructure projects in the region, in partnership with local municipalities.

3.2.3 Montreal

In the greater Montreal area, transit services are plan by the Autorité Régionale de Transport Métropolitain (ARTM), a public transit authority established in 2017. The ARTM service area includes the Montreal metropolitan area, the Kahnawake First Nations reserve, and the city of Saint-Jérôme.

Through its operating arm, EXO, the ARTM operates all commuter bus and rail services plus paratransit in the region. This function replaced the role of Agence métropolitain de Montréal (AMT) when Exo was formed.

ARTM is responsible for setting fares for the four urban transit systems in the area, and for the management of major infrastructure projects. In the City of Montreal, ARTM has a service level agreement with STM, while STM is responsible for operational planning and delivery.

3.2.4 USA

In the US, many urban areas, both large and small (in terms of population and geography), establish what are called transit districts (or transit overlay districts) for coordinated planning and administration of transit service.

Several jurisdictions combine area transit systems planning on a regional basis to help ensure integrated decision making. These districts are given the power of government in administering transit planning and service delivery to address transit issues. This includes the power of expropriation, and taxation, independent of the municipal jurisdictions included in the district.

US transit districts are most similar to TransLink in Vancouver, though responsibilities are typically limited to transit service planning and delivery.

3.3 Transit Infrastructure and Priority Measures

Transit services are supported in many areas by a variety of desiccated transit infrastructure and priority measures. These include:

- Yield-to-Bus (Cédez): Several provinces have Yield-to-bus legislation requiring motorists to yield the right-of-way to buses re-entering the roadway from a bus stop, whether curbside or in a layby. Legislation is in place in British Columbia, Ontario, Quebec, Nova Scotia, PEI, and Yukon. In most areas, in the event of a collision, the motorist is charged with failing to yield, while responsibility for the collision is determined on a case-by-case basis.

- Bus-on-Shoulders (BOS: Several jurisdictions allow transit buses to operate on the shoulder of highways in cases where traffic conditions are delaying the bus. In most cases, bus operators are only allowed on the shoulders when the prevailing speed drops below a threshold value and are limited to operating at or near the threshold speed while on the shoulder. In Ontario, specific regulations (*OR 618/05*) is in place allowing vehicle from designated transit agencies to operate on specific section of roadway. These include:
    - OC Transpo on Highway 417 in Ottawa
    - GRT (Waterloo) on Highway 8 segments
    - Miway (Mississauga) on Highway 403
    - Metrolinx o segments of Highway 401

  Other provinces have similar provisions, notably Highway 99 in Vancouver, Highway 40 in Montreal (STM)
  In the United States, more than a dozen urban areas permit use of the shoulder under certain conditions and in certain areas.[xii]

- Highway Bus Stops: In many jurisdictions, bus laybys are discouraged by transit operators in the interest of maintaining transit speeds and convenience. However, in rural areas and on higher speed highways, the bus layby is recognized as a necessary safety element to enhance pedestrian access where sidewalks and curbs may not be present and to provide a safe refuge for the bus to stop out of the flow of high-speed traffic.

  The National Transport Authority of Ireland,[xiii] the Indian Roads Congress[xiv]have published extensive guidelines on locating bus stops in rural areas[xv]

  - Queue-Jump facilities: Queue jump (or Q-Jump) are limited area priority facilities that allow buses to by-pass stopped or slow-moving vehicles. The Bus-on-Shoulder facility can be considered a Q-jump application. Other common applications include:
    - Q-jump lanes at intersections, allowing buses to bypass waiting cars and advance through an intersection ahead of traffic (Examples: Ottawa, Brampton, Montreal, Halifax, Vancouver)
    - Dedicated entrances separate from regular traffic at stations, shopping centres, major institutions.

3.4 Inter-jurisdictional Coordination

There are a few key areas of inter-jurisdictional coordination in trans services where the overall governance and operation of services remains separate. Notable among these is the National Capital Region, with transit services operated by OC Transpo and Société de transport de l'Outaouais (STO). STO and OC Transpo maintain an integrated trip planner, fare card interoperability and coordinated schedules and transfer points in each community. While it does not have any planning or funding control, The National Capital Commission is involved in the planning of infrastructure projects throughout the region.

The inter-provincial nature of both OC Transpo's and STO' services mean that their services fall under control of federal legislation, administered by Transport Canada, rather than provincial regulations.

3.5 Summary of Available Transit Funding

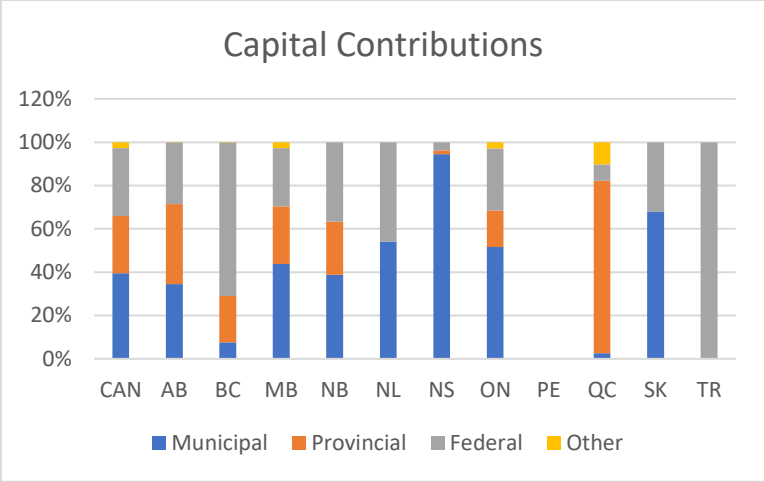
3.5.1 Funding Summary by Province

Figure 1 and Figure 2 show a summary of transit funding by province for 2019 for urban transit systems that are members of the Canadian Urban Transit Association[xvi]. Several small community systems are not CUTA members, and their funding is not included here.

Figure 2 shows the absence of federal funding in the operating cost sphere, where most operating expenses are covered by fares and municipal contributions. The exceptions are BC (where "other accounts for BC transit's funding from the province), Manitoba, dominated by operating support for Winnipeg Transit only, and Quebec.

Figure 1 illustrates that a substantial share of the capital funding comes from federal and municipal sources. Provinces play a moderate role in most provinces, except Quebec.

Figure 1 - Summary of 2019 Capital Subsidies for CUTA members



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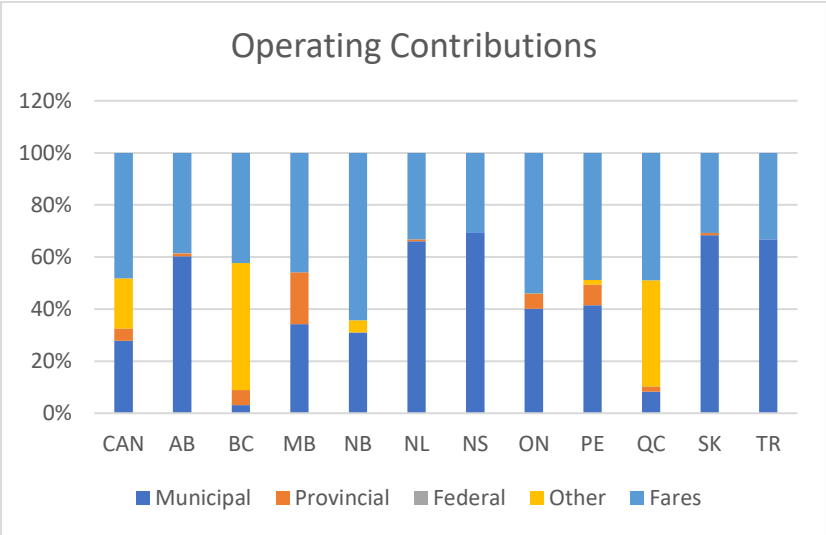

Figure 2 - Summary of 2019 Operating Subsidies for CUTA members

3.5.2 Funding Programs and Details

Federal

Federal infrastructure programs have evolved over the last 15 years from ad hoc grant programs to the new Permanent Transit Fund. The current program is the Transit Stream of the Investing in Canada Infrastructure Program (ICIP), which concludes in 2025.

Despite the funding eligibility through 2025, all funds have been allocated to the provinces, and most provinces have allocated their funds to local or regional projects.

ICIP Details

- Eligibility criteria: capital expenditures, including planning and design.
- Application requirements: projects submitted though joint federal / provincial process.
- Provincial applications are closed.
- Territorial application open until March 31, 2025
- Type(s) of projects supported:
    - Improve the capacity of public transit infrastructure.
    - Improve the quality or safety of existing or future transit systems; and
    - Improve access to a public transit system.
- Funding value: 33 billion
- Winter maintenance focus: none

Permanent Transit Fund (PTF)

- Eligibility criteria: capital expenditures, including planning and design.
- Application requirements: to be determined.
- Type(s) of projects supported: to be determined.
- Funding value: $3 billion annually, beginning in 2026.
- Winter maintenance focus: unknown

Near-term Transit Funding

To help address near-term requirements until the PTF is established, the federal government has established a fund for three types of urban mobility projects, totalling $5.9 Billion. Of this amount, about $3.4 billion has been allocated to

- Rural Transit Solutions Fund ($250M)
- Active Transportation Fund ($500M)
- Zero-Emission Transit Fund ($2.75B)

The remaining $2.5B will be allocated to shovel-ready capital projects on a case-by-case basis.

Rural Transit Solutions Fund

- Eligibility criteria: capital expenditures, including planning and design.
- Application requirements: open application process for planning stream and capital stream (planning stream currently closed, but new round expected)
- Type(s) of projects supported: transit infrastructure, vehicles, software, community infrastructure to support access to transit services.
- Funding value: $250 million, until 2026
- Winter maintenance focus: no specific focus, capital expenditures only

Provincial / Territorial Programs

As noted, most provinces only support capital projects, with their own funds and through the administration and required matching of ICIP funds from the federal program. The following section outlines a selection of provincial and territorial programs that support operating expenditures, over and above the eligible capital funding.

Generally, these programs exclude any special ad hoc programs to support transit systems in short-term COVID recovery.

Programs in British Columbia and Quebec, which are part of the provinces transit service delivery model, are described in the previous section. Provincial programs also include matching fund programs to unlock federal funding contributions.

Alberta

In February 2023, the province of Alberta announced a $15M program[xvii] to support low-income subsidies for Alberta Transit systems. Calgary and Edmonton each received $4.5M and an additional $6M was allocated to 10 communities. The funds are to be used to provide subsidized passes in Calgary and Edmonton, and to support the expansion of services in low-income areas in the other communities.

Saskatchewan

The Transportation Assistance for People with Disabilities[xviii] (TADP) program provides about $3M in operating funds and $800k in capital funding to 78 communities in Saskatchewan.

The funding formula allots participating municipalities with an annual operating grant calculated using the number of public service trips provided by each municipality in the previous calendar year, and a per trip amount based on one of the four population categories for the communities.

The program is administered by the provinces Municipal Grants program and participating municipalities submit an annual application for funding.

Ontario

The Ontario gas tax program dedicates two cents of the provincial gasoline tax to transit funding, generating about $325m to $375M annually. During the pandemic, when operating revenues fell significantly short of expenses and gasoline taxes also declined, the gas tax fund was topped up in conjunction with federal funding to ensure no loss of operating funds to municipalities. Gas tax funds are allocated based on a formula that includes urban transit ridership (70%) and service area population (30%). This means that most small municipalities' allocations are driven largely by population, while medium and large systems have a significant ridership component.

Ontario also implemented the Community Transportation Grant Program for small and rural communities, which includes capital funding and operating contributions (up to 100%) for small rural systems. the intent of the program is to support rural systems for up to five years to help them become viable and self-sustaining.
The program provides a total of $30M in funding for both capital and operating expenditures:

- Maximum grant of $500,000 in funding for local community transportation projects for a five-year period, and
- Maximum grant of $1.5 million in total funding for long-distance scheduled intercommunity bus service for a five-year period.

Almost 40 communities have received funding and implemented service under this program.

Nova Scotia

Community Transportation Assistance Program - The Community Transportation Assistance Program is providing almost $2 million in operating funding to 20 door-to-door community transportation services across Nova Scotia

Public Transit Assistance Program provides almost $3million to seven municipalities and community organizations providing fixed route transit services. Funding is available for capitals projects only.

Nova Scotia also maintains the Nova Scotia Transit Research Incentive Program[xix], (NS-Trip), which provides funding for transit projects that generate new and improved public transit services in rural areas and underserviced urban areas. Projects need to be directly related to enhancing the service capacity of new or existing public transit organizations in Nova Scotia.
Funding is available to

- non-profit organization with public transit mandates
- municipalities (for underserviced areas)
- public transit provider owned by a municipality or a corporate entity on behalf of a municipality.
- incorporated association representing public transit service operators in Nova Scotia

The current round of funding for 2023 / 2024 close May 5, 2023.

Newfoundland and Labrador

The 2023-24 Newfoundland and Labrador Community Transportation Program[xx] supports the development, implementation, and evaluation of accessible and inclusive community transportation services.

Funds of up to $100,000 per application are open to municipalities, indigenous governing bodies, and registered not-for-profit agencies. Funds can be used for planning and implementation of projects, including capital expenditures and operating costs related tom monitoring and evaluation.

Local

A variety of local service agencies, planning organizations and charities, offer numerous grants in all areas of the country that can be used by transit service providers to support their service delivery and capital projects.

3.6 Key Take-aways

- Transit supportive policies are directly linked to land use policies and require an integrated approach in their development.
- With the exception of large metropolitan centres, organizational structures for transit service delivery are typically limited to local agencies, except in British Columbia and Québec. In the large centres (Vancouver, Toronto, Montreal) regional agencies have primarily been developed to coordinate the planning and service delivery of existing agencies.
- Virtually all available funding is for capital projects; upper tier funding for operations is very limited and almost all agencies rely on local funding.

4. ROLE OF PROVINCES/TERRITORIES IN ACTIVE TRANSPORTATION

Across Canada, there is growing momentum among governments and non-governmental organizations as they develop policies and programs to support active transportation and healthy built environments. Provincial and territorial ministries across Canada are interested in understanding the role, mandate, and opportunities regarding active transportation in their jurisdictions.

Provincial and territorial government are involved in active transportation through different initiatives such as developing regional strategies and guidelines, constructing multi-use trails near highways, building bike infrastructure, and supporting municipalities by providing grants. Provinces have a significant role in the development of active transportation facilities through funding and developing guidelines and regulations.

Most provinces do not have specific legislation solely dedicated to active transportation. However, various provincial laws and regulations related to transportation and road use that indirectly impact active transportation modes such as walking and cycling. Most notably, provincial, and territorial motor vehicle acts typically provide definitions for bicycles and outline the rules and regulations that apply to cyclists (i.e., definition, rights and duties, safety equipment, right-of-way, infrastructure, and facilities)

One common critique in the literature refers to a generalized perception of lack of Provincial/Territorial leadership in active transportation, largely alluded to the fact that active transportation is generally not the domain of any single stakeholder at the provincial/territorial level[3]. Typically, within provincial and territorial government, transportation ministries focus primarily on provincial road network policy development, project implementation, funding, research, program design and jurisdictional infrastructure maintenance.

Other ministers however may be involved in active transportation, for example ministries of health, climate change, education, or tourism, but their primary focus is not transportation. In many communities, stakeholders see leadership often coming from local/regional governments, non-governmental organizations, senior managers, or political champions personally committed to the cause, rather than from a consistent and sustained Provincial/Territorial program.

As discussed, Municipalities are enabled by Provincial and Territorial legislation to establish bylaws and regulations pertaining to active transportation. Critics[4] argue that instead of a soft ‘enabling’ model for municipalities to opt in, Provinces and Territories should instead legislate direct ordinances for municipal mandate. Such ‘enabling’ policies, critics further argue, do not have a direct impact on increasing physical activity in the population. For example, Municipal Acts, Hamlet Acts and Community Charters enable, but do not require, local governments to pass bylaws and

[3] https://www.canada.ca/en/public-health/services/health-promotion/healthy-living/physical-activity/mobilizing-knowledge-on-active-transportation.html#a4
[4] https://www.partnershipagainstcancer.ca/topics/physical-activity-policies/active-transportation/

plans governing transportation. Direct policy actions related to active transportation tend to exist at regional, municipal, or local levels.

Another noted shortcoming of Provincial/Territorial involvement in Active transportation is driven by the notion that because most active transportation often occurs within communities, hence it is solely the responsibility of local municipalities to plan, fund, implement and maintain AT networks. Further, municipalities are expected to focus on community planning, design, and implementation of active transportation infrastructure and maintenance, supporting policy and bylaw development, project implementation and community outreach. This generally aligns with the operational role municipalities have in the delivery of public transportation in Canada.

Provinces and territories also indirectly contribute to active transportation through funding for highway maintenance, road construction, climate change, and traffic safety. In some cases, a portion of a project budget aimed at improving a highway may be used for active transportation infrastructure or supporting facilities such as improved lighting, paved shoulders, demarcation, and improved crossing treatments. Grants relating to climate change and public health help indirectly fund active transportation. This indirect nature of funding for active transportation aligns with the multivariate nature and wide reach that active transportation has in society.

School zone legislation is governed at the provincial and territorial levels, meaning the specific regulations and laws can vary across different regions. Provinces and territories often have regulations and guidelines specifying the establishment and use of school zone signs and markings (i.e. Alberta, Manitoba, Ontario, Nova Scotia) as well as penalties and enforcement measures for violations of school zone regulations.

4.1 Policy and Guidance Examples

The 2018 report from the Transportation and Environment Task Force Policy noted that programs and policies in support of Active Transportation are highly variable among provinces and territories.

Several provinces have created active transportation strategies of their own: British Columbia, Ontario, Québec, Prince Edward Island, and Nova Scotia have strategic plans and resources to guide development of active transportation. it was found that many Provinces have developed significant policy and program to enable active transportation along roads and highways under their jurisdiction.

4.1.1 Quebec

The Route Verte has been the driver behind the development of active transportation in Québec for the last 20 years and often constituted the first part of the bicycle infrastructures that was put in place by municipalities, leading to the planning of other cyclable or walkable links as offshoots of the national Route Verte network. The target for the Route Verte is to complete the 5,308 km of the 2008 plan by 2023 (232 km left to add) and add the extension (858 km) by 2030.

Legislative framework

- Provincial Bicycle Policy adopted in 1995 (updated 2008) as part of the adopted Rote Verte Plan

- Provincial urban and regional development laws Act Respecting Land-Use Planning and Development (A-19.1), the Cities and Towns Act (C-19) and the charters of the cities of Gatineau, Lévis, Longueuil, Montréal and Québec (C-11.x).
- There is Regional Body, the regional county municipalities (RCM), that coordinates municipalities and plays a role in the integration of transportation planning and land-use development. Member municipalities take part in planning active transportation networks of regional interest which may be coordinated with the financing at the municipal level.
- Amend Provincial Acts (Land-Use Planning and Development Act, Roads Cities and Towns Act, Municipal Code, Municipal charters) to systematically take into account active transportation into territorial planning.
- Amend the highway Safety Act and roadways standards to introduce cycling treatments and modified road cross section elements
- Adopting a provincial management framework to ensure active transportation is considered in all projects in its road works planning. The framework should plan for systematic consideration of the presence of pedestrians and cyclists for any road project carried out within urban perimeters whether it is on a standard section, an intersection or structure or to cross highways that run through urban perimeters.

Guiding Principles

- The capacity for people of any age to choose self-powered transportation to get to their destinations is a key component of Québec's sustainable mobility vision.
- cycling cultures by groups such as Vélo Québec and the creation of infrastructures such as the Route Verte, the largest cycling network in North America.
- It is possible to cycle and walk all year round, but this requires special attention to the design and maintenance of the infrastructures.

Collaborative planning process

- The municipalities are the government's main active transportation partners, financial assistance programs are primarily for them

Strategic Partnerships

- La Route Verte in Québec is a well-established network of cycling trails and bikeways that was built through a partnership between Vélo Québec, the province and municipalities. including more than 5,000 on the Route Verte (2016)
- Thanks to an initiative by Vélo Québec, Québec now has a network of 500 "Bienvenue cyclistes!" (welcome cyclists) establishments, so cyclists can find accommodations to suit their needs.

Inter-jurisdictional mechanisms

- Mandate includes the notion of active mobility in municipal planning and laws

- Offer financial assistance to municipalities for the development of integrated sustainable mobility plans in their territory. This program will include an envelope of $50 million for the first five years. An amount of $2.5 million is also budgeted in support services for the production of plans and the preparation of guides and reviews of best sustainable mobility practices.
  Indicator: Number of plans adopted
  Target: 100% of the RCM
  Budget: $2.5 million (current funds); $50 million (additional funds)

- Extension of the self-service bicycle network Québec agglomerations This measure will support municipalities in the development of a self-service bicycle offering, Budget: $13 million over five years (additional funds)

Other tools

- Encourage the use of active transportation, including in Québec government business places. offering enough bicycle parking for employees and visitors and changing rooms with all commodities. Carrying out this measure will involve offering these services in all Québec government offices, to set an example.

4.1.2 British Columbia

As part of the CleanBC plan, the provincial government developed this strategy (Move, Commute, Connect) to guide interjurisdictional work with regional, local, and indigenous governments to support active transportation mobility. The Strategy includes education, policy review, partnerships, incentive programs, design guidelines as well commitments for improvements to current AT transportation networks. By 2030, the province has set a target of doubling the proportion of trips taken using active transportation. The strategy included extensive consultation with transportation providers, local government, Indigenous communities, planners, cycling organizations, walking groups, transit providers and community organizations.

Legislative framework

- Review legislative, regulatory and policy frameworks to acknowledge all road users and emerging active transportation modes including:
  - BC Motor Vehicle Act.
  - Community Safety Act
- Work with the Insurance Corporation of BC (ICBC) to review and assess the appropriateness of driver education content that includes rights and responsibilities of all road users.
- Reviewing enabling legislation to allow municipalities to devise alternative funding sources, funding reallocation other mechanisms to fund active transportation projects (i.e., development cost charges[5])

[5] Development Cost Charges (DCCs) are monies that are collected from land developers by a municipality, to offset some of the infrastructure expenditures incurred, to service the needs of new development.

- The Strategy will be included in the Ministry's Integrated Transportation and Development Framework to ensure active transportation is part of planning and implementation of transportation programs, policies and infrastructure projects across B.C

Guiding Principles

- Adoption of Vision Zero, which would see no fatalities or serious injuries resulting from collisions or crashes on the road.
- Active transportation should be a safe, easy, and convenient way for people to get around in all regions of B.C.
- British Columbia should have an integrated, safe, and accessible active transportation system that works for everyone.
- Policy and planning should support integrated, comprehensive active transportation networks.
- Improved and expand training and education about active transportation options and their benefits.
- Shift the way communities are developed and how we design infrastructure and allocate funding.
- Lead by example by encouraging provincial employees to use active transportation.
- Convene discussions with local governments, Indigenous communities and transit providers to continue to improve the integration of transit with active transportation networks.

Collaborative Planning Process

- Establish partnerships among all levels of government to plan for and identify active transportation investment opportunities.
- Expand the existing Provincial grant programs to include all forms[6] of active transportation and to support planning and infrastructure.
- In the future, BikeBC will become more inclusive of all types of active transportation, and may include funding for planning, design, education and encouragement for active transportation in addition to infrastructure.
- Promote the Vision Zero principles outlined in the B.C. Community Road Safety Toolkit to communities and partner organizations.
- Provide funding to promote Learn to Ride programs and safe and active routes to school planning.
- Improved enforcement that will help to eliminate conflicts between active transport and other road users.
- Create a provincial active transportation education toolkit

[6] Active transportation refers to the movement of people or goods powered by human activity, and 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.

- As provincial highways are developed, improved or reconfigured, active transportation will be integrated in their design and construction, especially those in and around communities.
- Developed the B.C. Active Transportation Design Guide and encourage all levels of government to apply it consistently.
- Work with local governments and Indigenous communities to develop and support multimodal connections and provide clear and consistent signage to help people find their way around.
- Support for municipal planning to connect local and regional active transportation infrastructure with provincial infrastructure.
- Encourage local and regional governments to take consistent approaches to active transportation planning through Official Community Plan development, by-laws and policies.
- To promote partnerships and data sharing, create a website and resource hub to share research, tools, and best practices.
- Support research to identify and reduce the barriers to participation in active transportation for people of all ages and abilities, with a focus on underrepresented populations.
- Encourage communities, non-profits, health partners and educational institutions to share data with the Province, and to conduct research and data collection to track increase in mode shift.

Strategic Partnerships

- Partner with British Columbia's tourism sector to promote active transportation as an enjoyable, healthy and sustainable way to explore our province.
- Continue to use the existing Community Safety Enhancement Program to support improvements to active transportation infrastructure in communities. Program was launched in 2010. Since then, 120 safety enhancement projects have been completed.
- Provide increased support to community-based active transportation programs and events, such as Bike to Work Week and Walktober, and to the development of new programs.
- Improving connections and facilities at transit hubs and stops with programs like the Transit Minor Betterments Program. A collaboration between the Province, local governments, Indigenous communities, TransLink, BC Transit and BC Ferries to make a wide range of improvements to transit infrastructure (i.e., g bike racks and creating or improving safety and accessibility features like sidewalks, shelters, and wheelchair ramps.)
- Deliver safety training and education, with an emphasis on promoting active transportation among those who don't currently use it.
- Partner with community and public safety to deliver anti-theft campaigns and bicycle registration programs.
- Support development of end-of-trip facilities and other supportive infrastructure at transfer points (i.e., provincially owned buildings, transit stations, ferry terminals and airports)

Inter-jurisdictional mechanisms

- Cost-share funding to communities to help build and complete safe active transportation networks and connections. BikeBC (cost-sharing program) provides local governments up to 75 percent of total eligible costs for cycling infrastructure projects.
- Improving connections and facilities at transit hubs and stops with programs like the Transit Minor Betterments Program. A collaboration between the Province, local governments, Indigenous communities, TransLink, BC Transit and BC Ferries to make a wide range of improvements to transit infrastructure (i.e., bike racks and creating or improving safety and accessibility features like sidewalks, shelters, and wheelchair ramps.)
- BC Cycling Policy takes a creative approach to improving bicycling infrastructure at the provincial level by requiring new or upgraded highways to include provisions for cyclists.
- Bike BC: Cycling Infrastructure Partnerships Program (CIPP)

Other Tools

- Provide funding to promote Learn to Ride programs and safe and active routes to school planning.
- Developed the Transportation Options Program under Scrap-It, which provides an incentive of $850 toward the purchase of a new e-bike to people who scrap high-polluting vehicles.
- Work toward ensuring that adequate end-of-trip facilities are available in government buildings
- Seek increased funding to support expanded provincial grant programs specific to rural and Indigenous communities. (I.e., a new stream of BikeBC will be dedicated to supporting active transportation projects in Indigenous communities).
- In the future, BikeBC will become more inclusive of all types of active transportation, and may include funding for planning, design, education and encouragement for active transportation in addition to infrastructure.
- Conducting enhanced road shoulder cleaning on provincial roads—removing debris and snow
- Enhance rail trails and bridge connections and improve access to trails on private land.
- Translink Rapid Implementation Design Guide for Bikeways in Metro Vancouver
- TransLink Sales Tax Exemption for Bikes

Funding

- Active Transportation Infrastructure Grants Program (BCATIG). Formerly BikeBC.
    - Active Transportation Network Planning Grant
    - Active Transportation Infrastructure Grant
- Community Safety Enhancement Program
- E-Bike Rebates
- Transit Minor Betterments Program
- Active Transportation Planning (Union of BC Municipalities)
- The BC Ministry of Transportation and Infrastructure budget for active transportation on provincial rights-of-way is incorporated into highway project budgets.

4.1.3 Ontario

The Government of Ontario has recognized the importance of active transportation in reducing greenhouse gas emissions, promoting healthier lifestyles, and creating more livable communities. As a result, it has several active transportation policies in place aimed at promoting and supporting sustainable and active modes of transportation. Below is a summary of noteworthy active transportation policies and initiatives in Ontario:

Policies and Plans

- Ontario's Cycling Strategy (Cycle ON): The province has developed a Cycling Strategy, which outlines the government's commitment to building a more cycling-friendly Ontario. It focuses on improving infrastructure, education, and awareness, and promoting cycling tourism. It is a 20 year-vision to promote cycling and cycling safety in Ontario, implemented through multi-year action plans.

- A Province-Wide Cycling Network: A province-wide cycling network including over 9,800km of cycling routes has been identified for long-term development. The network study was undertaken to identify a continuous and connected provincial network of on- and off-road cycling routes to connect municipal cycling routes and places of interest, promote recreational cycling and cycling tourism in Ontario, and help prioritize future cycling investments in provincial highways. An integrated province-wide cycling network is one of the aspirational goals of #CycleON: Ontario's Cycling Strategy. Identifying the network is a key commitment in the first action plan to implement #CycleON.

- Active Transportation and/or Cycling Master Plans: Many municipalities in Ontario develop Cycling Master Plans to guide the development of cycling infrastructure and promote cycling as a viable transportation option. These plans outline specific cycling network priorities, infrastructure improvements, and education and promotion initiatives.

- MTO Regional Transportation Master Plans Since 2020 The Ontario government is delivering on its commitment to develop regional transportation plans that will connect people and places across the province. Plans are multimodal in nature including freight movement, private transportation, regional and local transit as well as active transportation networks. The plans contain specific near- and long-term actions, including highway expansions and public transit improvements. Four regional transportation plans have been developed – including Connecting the Southwest, Connecting the North, and the Greater Golden Horseshoe – covering all regions of the province.

Legislative Framework

- Highway Traffic Act (HTA): The HTA is the primary legislation governing road use and traffic safety in Ontario. It includes provisions that apply to pedestrians, cyclists, and other road users. The HTA outlines rules and regulations for road sharing, right-of-way, signaling, and equipment requirements. The HTA includes provisions to protect vulnerable road users, such as pedestrians and cyclists. It outlines penalties for drivers who commit offenses that endanger these users and highlights the responsibilities of all road users to exercise care and caution.

- Accessibility for Ontarians with Disabilities Act (AODA): The AODA aims to make Ontario more accessible for people with disabilities. While not specific to active transportation, it includes standards for accessible transportation, which indirectly benefits pedestrians and cyclists by promoting barrier-free infrastructure.

- Safer School Zones Act, 2017, S.O. 2017, c. 9 - Bill 65. The Ontario Highway Traffic Act also authorizes municipalities to establish school zones and community safety zones to enable special treatments (i.e. reduced speed limits, ASE enforcement, penalties and offenses) in zones or road segments deemed as of higher risk or concern. School zones or community safety zones are designated by by-law passed by municipal councils as described in the Highway Traffic Act. For example, the implementation of Automated Speed Enforcement (ASE) devices is only allowed in legally designated school or community safety zones.

- Paved Should Legislation. Although not legislated yet, Ontario has been debating for year a bill that would require a one-metre paved shoulder be added whenever designated secondary highways are being resurfaced. The province has recognized the benefits of paved shoulders and has implemented various initiatives and guidelines to encourage their use and development. In the 2013 Book 18 – The Ontario Traffic Manual, under the heading 'Signed Bicycle Route with Paved Shoulder' there is a chart showing the desired measurement of shoulder widths for rural bicycle routes as 1.5 to 2.0 metres (depending on traffic volume). The Province has pilot several projects as well as several municipalities are actively embracing and implementing the concept on road under their jurisdictions.

Guiding Principles & Design Guides

- The Ontario Traffic Manual (OTM) is a series of documents published by the Ministry of Transportation of Ontario (MTO) that provide guidance and standards for traffic engineering and road design in the province. The OTM consists of several books, each focusing on specific aspects of traffic control, road design, and transportation-related topics.

- The (OTM) Book 18: Cycling Facilities, released in 2021, is the prime cycling design manual for the province, featuring major overhaul from the original version with a focus on physically separated infrastructure and advanced safety measures at intersections. It was developed through a collaboration with the Ontario Traffic Council, the Ministry of Transportation, Share the Road, True North Safety Group, Accessibility Simplified and engagement of the municipal and agency staff who contributed as well as stakeholders and members of the public.

- Complete Streets: The concept of Complete Streets is incorporated into transportation planning and design guidelines on many municipalities across the province. Complete Streets aim to accommodate all road users, including pedestrians, cyclists, and transit riders, along with motorized vehicles. The design principles prioritize safety, accessibility, and connectivity for all modes of transportation. Complete Streets best practices can serve as a guide for policy development in rural local and regional municipalities.

- Active Transportation in Transportation Planning: The Ministry of Transportation of Ontario (MTO) encourages municipalities to include active transportation in their transportation planning processes. This includes integrating walking and cycling infrastructure into transportation networks and considering active transportation in the design of new roads and transit projects.

Collaborative Planning Process

Provincial leadership is central to the promotion of active transportation infrastructure. The Province of Ontario has shown great leadership on initiatives such as the launch of the Ontario Cycling Strategy (#CycleON) and the release of Ontario Traffic Manuals such as Book 18 (Cycling Facilities) which have given great support to local efforts and initiatives.

Nonetheless, this leadership needs to be accompanied with proper consultation and mechanisms so that local municipal interests are recognized and incorporated. In this context, dedicated active transportation staffs are also central to the improvement of active transportation networks.

Other Tools

- Education and Awareness: The government promotes education and awareness campaigns to encourage active transportation. These initiatives aim to inform the public about the benefits of walking, cycling, and other forms of active transportation, as well as to promote safety and proper road etiquette.

- Bike Share Programs: Ontario has several bike share programs, such as Bike Share Toronto, Hamilton Bike Share, and Ottawa's VeloGO. These programs provide access to bicycles for short-term use, enabling residents and visitors to conveniently cycle for transportation or leisure purposes.

Funding

The Ontario Cycling Strategy (#CycleON) identifies strategic directions to develop a funding partnership with municipalities and the federal government to build provincial and municipal cycling routes, and fund provincial and municipal cycling infrastructure pilot projects to test new ideas and gather data[7]. For example:

- The Ontario Municipal Commuter Cycling Program
- The Ontario Municipal Cycling Infrastructure Program (OMCIP) offer funding to municipalities for the development of cycling infrastructure, including bike lanes, multi-use trails, and cycling parking facilities. A $10 million in one-time grant funding through the Ontario Municipal Cycling Infrastructure Program (OMCIP)
- Ontario Healthy Communities Fund
- Sales Tax Exemption for Bicycles and some Accessories
- Ontario Transportation Demand Management Municipal Grant Program

[7] MTO (2013). Ontario Cycling Strategy. Ministry of Transportation, Ontario

4.2 Key Take-aways

- The recent National Active Transportation Strategy and funding program, although in its infancy, has already set the stage and generate 'momentum' for inter-jurisdictional collaboration while directly supporting local and regional AT infrastructure projects across Canada.

- Most Provinces and Territories still do not have specific legislation or bidding strategies for active transportation.

- Provincial and Territorial leadership in active transportation is still weak as its role and mandate is diffused among various groups, departments, various ministries, and stakeholders, while upholding the notion that active transportation is still very much a municipal jurisdictional concern.

- Municipalities are enabled but not mandated by Provincial and Territorial legislation to establish bylaws and regulations pertaining to active transportation. In practice, local bylaws related to public and active transportation are weak and, in most cases, non-existent.

- Best practice cases including Quebec, British Columbia and Ontario, have stronger mandates, legislation and dedicated bodies, and biding commitments for local governments as well as a robust and holistic strategy and implementation plan that includes, among many things:

    - Reviewing and updating outdated legislation to explicitly include AT (i.e motor vehicle act, community safety act, municipal development act and charters, safer school zones act, accessibility acts, paved shoulder legislation);

    - Establishing and disseminating AT best practices for implementation,

    - Adopting provincial management framework to ensure active transportation is considered in all road works planning.

    - Establishing a provincial AT network as the back-bone of regional and local networks.

    - Empowering, funding and supporting AT community advocacy groups

    - Bridging existing funding gaps for planning, maintenance and operation, mode shifting (i.e., financial assistance to municipalities for the development of integrated sustainable mobility plans, cost-sharing for project implementation, operations and maintenance subsidies, grants/rebates for e-bikes adoption, TDM grants, etc.)

    - Integrated plans and supporting legislation to leverage emerging topics in transportation planning including Vision Zero, Complete Streets, Transportation Equity

5. JURISDICTIONAL SCAN

The purpose of the Jurisdictional Scan was to examine and analyze relevant case studies from various jurisdictions, allowing us to gain valuable insights and best practices applicable to our project scope. These case studies were selected based on their relevance and alignment with the objectives outlined in the approved project scope.

To conduct the Jurisdictional Scan, we employed a comprehensive research approach. Our team extensively reviewed and analyzed a wide range of sources, including legal databases, academic publications, government reports, and reputable industry publications. The selected case studies were thoroughly evaluated and compared to identify common patterns, differences, and successful strategies implemented in various jurisdictions.

5.1 Public Transit Case Studies

5.1.1 Highway 16 Transportation Action Plan

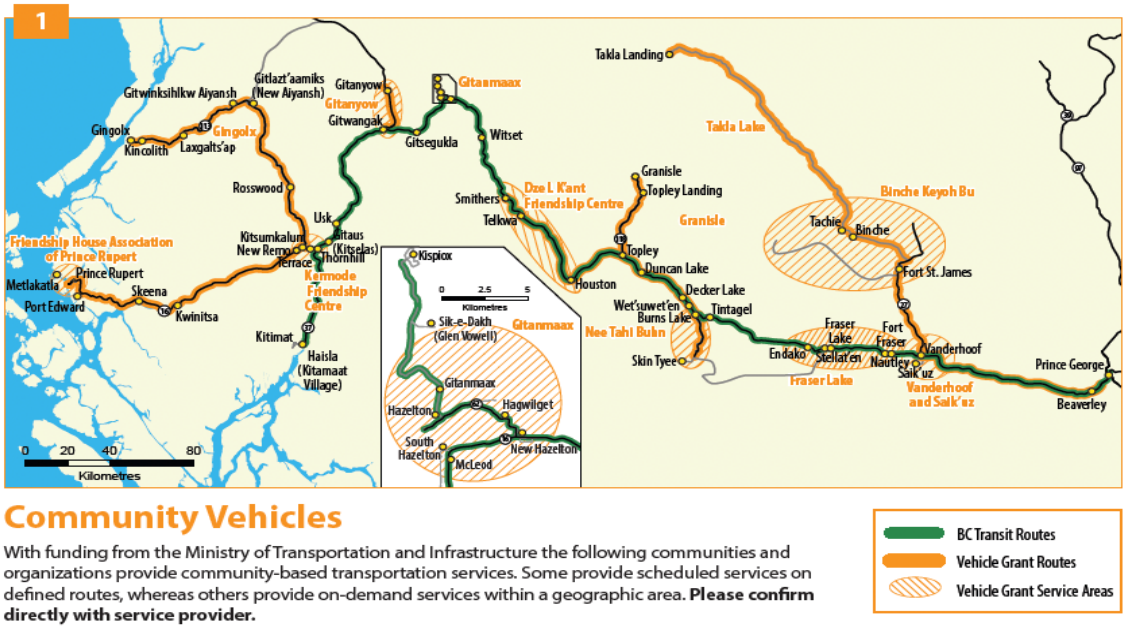

Figure 3 - Hwy 16 Transportation Action Plan Transit Services

Service / Program Description

The Highway 16 Transportation Action Plan was designed to enhance inter-community travel in the Highway 16 corridor between Prince George BC and Prince Rupert BC. It includes a five-point action plan including:

- Inter-community transit service in Hwy 16 corridor, with 4 segments serving Prince George – Smithers.
- Community Transportation program to support community services for local trips and corridor connections in 12 communities with both capital and operating support.

- Other non-service elements:
  i. Driver education
  ii. Transit shelter and safety program
  iii. Collaboration with local agencies and jurisdictions

Service Principles

The service plan was developed with the following principles:

- Service reliability for mobility and safety
- Same day return to/from nearest service center community
- Affordable fares
- Service levels based on-demand
- Coordination with existing services

Summary of implemented policies

- Same-day return travel. Four intercity routes have been established as shown in Figure 3. The services operate three days per week (days vary by route), at a cost of $5 per one-way trip.
  - Prince George – Burns Lake
  - Burns Lake - Smithers
  - Smithers – Kispiox
  - Kispiox – Hazelton

  For example, the Burns Lake – Prince George service operates Tuesday, Thursday and Saturday with a weekday eastbound trip at about 7:00 am (from Burns Lake) arriving at about 11:00 am and a return trip from Prince George departing at 3:00 pm.

  As shown in Figure 3, the corridor services are also supplemented by Community Grant routes that provide connections from 12 smaller communities off the corridor to the corridor routes, as well as between those smaller communities.

- Affordable Fares. Fares on the corridor connecting routes are $5 for a one-way trip. With a distance of more than 225 kilometres from Prince George to Burns Lake, and comparable VIA Rail fare of $38, the %5 fare is quite affordable.

- Service Levels based on Demand. Different routes in the corridor offer different numbers of daily trips, based on demand. For example, compared to the Prince George Burns Lake route, The Burns Lake – Smithers route offers an additional daily trip between Smithers and Houston.

- Coordination With Existing Services. The corridor services make connections to local transit or on-demand services and/or destinations in Prince George, Terrace, Hazeltons, and Smithers. Also, passengers can connect to / from VIA rail between Prince George and Prince Rupert and the BC Bus North service operating in the corridor and north on Hwy 97 to Ft. Nelson.

BC Transit Principles and Mandate

As part of BC Transit service offering, the Highway 16 corridor services are also managed within the overall framework of BC Transit objectives, which include:

- Maximize resources and grow ridership
- Increase customer satisfaction and encourage transit use
- Reduce Greenhouse Gas and Localized Emissions.

The provincial mandate for BC Transit also includes:

- Putting people first: consider how decisions maintain, protect and enhance the public services people rely on and make life more affordable
- Lasting and meaningful reconciliation: remain focused on creating opportunities that implement the Truth and Reconciliation Commission
- Equity and anti-racism: adopt the Gender-Based Analysis Plus (GBA+) lens to ensure equity is reflected in operations and programs.
- A better future through fighting climate change: Ensure operations align with targets and strategies for minimizing greenhouse gas emissions and managing climate change risk

Performance Metrics

Service performance is currently being evaluated in a service review, including community outreach to passengers and residents. Performance metrics under review include:

- User demographics
- Travel patterns and ridership
- Trip purpose and travel choices
- Customer perspectives
  i. Reliability
  Initial review results show about 80 percent of riders find the service to be “reliable” or “very reliable” and only 5 percent “very unreliable”. More than one-third of riders indicted that the service’s reliability was a key factor in choosing to use it.
  ii. Safety
  Initial review results show almost 90 percent of riders find the service to be “safe” or “very safe” and less than 5 percent “very unsafe”. About 25 percent of riders indicated safety as a key factor in choosing to use the service.
  iii. Affordability
  More than 60 percent of riders indicated affordability as a key reason for using the service.

Program Funding and Governance

BC Transit works in partnership with local governments. The Highway 16 corridor services are part of the regional transit system. For these services, planning and service design is typically conducted by BC Transit staff with local input. Service levels and budgets are approved each year by local government, who also set fares and local property taxes to pay their contribution of transit costs. This partnership is formalized through series of agreements: a Transit Service Area Agreement, Master Operating Agreement (MOA) and an Annual Operating Agreement (AOA).

Most services are operated by third-party contractors, selected through a periodic competitive public process.

The Province committed $5 million on a cost-shared basis with local communities, to expand BC Transit services that travel between cities. Initially, the Province committed to 100 percent funding of vehicles and 66 percent of operating costs. The remainder of operating costs was funded by the local and regional municipalities.

The Community Vehicle Program allocated $2.6 million to 12 community transportation services to assist in purchasing vehicles and to provide four years of operational support.

While multi-year commitments have not been renewed, annual funding renewals have been on-going, with the service adopted as part of BC Transit regular service plan.

5.1.2 WDFN Transit Service Project

Service / Program Description

The Whitecap Dakota First Nation is located about 30 kms south of Saskatoon, SK. It has a population of approximately 600 people, with plans to accommodate about 900 over the next several years as housing opportunities expand.

Whitecap is home to the Dakota Dunes Casino and Resort comprising a casino, hotel and conference centre, golf course and future spa. The facility is owned by the WDFN and operated by the Saskatchewan Indigenous Gaming Association (SIGA).

While the Dakota Dunes complex operates a shuttle for employees and patrons travelling between Saskatoon and Whitecap, community residents are not accommodated.

WDFN operates a medical transportation service to the local Health Centre and to Saskatoon, and staff also provide local trips for various social and recreational programs within the community. Currently there is gap in service for people wishing to travel to Saskatoon, or travel within the community for other non-program travel.

The objective of the transit service was to provide a commuter connector for local residents and community employees travelling to and from Saskatoon, and to enhance travel opportunities within Whitecap.

Service Principles

The service plan was developed with the following principles:

- Affordability and sustainability
  - Efficient service coordination
  - Leverage existing staff resources.
- Community support
  - Support local programs
  - Support indigenous employment
  - Enhance employment opportunities, health access and food security
- Accessible and affordable

- Accessible service for people with disabilities
- Fare free for local trips.
- Fare free with future fare option for commuter trips.

Summary of Implemented Policies

Affordability and sustainability

The Whitecap – Saskatoon shuttle is to be implemented as a shared venture between WDFN and SIGA. The existing employee / patron shuttle has spare capacity that will be open to Whitecap residents and employees.

A cost-sharing model was developed based on identified ridership. Initially the service will continue to be operated by SIGA and the recommended model was based on WDFN paying SIGA for a portion of the costs based on share of ridership with WDFN. Negotiations between SIGA and Whitecap will also consider capital contributions made by the WDFN to the resort infrastructure to reduce WDFN share.

Current operation will remain with SIGA, but study recommendations included take-over by WDFN with a third-party contractor. Implementation of this portion of the strategy will also consider the objective of expanding indigenous employment opportunities.

For local services, existing staff resources will be coordinated under a single functional unit within the WDFN organization structure. Local service delivery will be enhanced with efficiency improvements through the acquisition of an app-based paratransit booking and scheduling software.

Community Supports

The local service currently is limited to program-related transportation, and will be expanded to provide local employment trips from the community to the casino, as well as to future employment areas within the WDFN-owned business park under development.

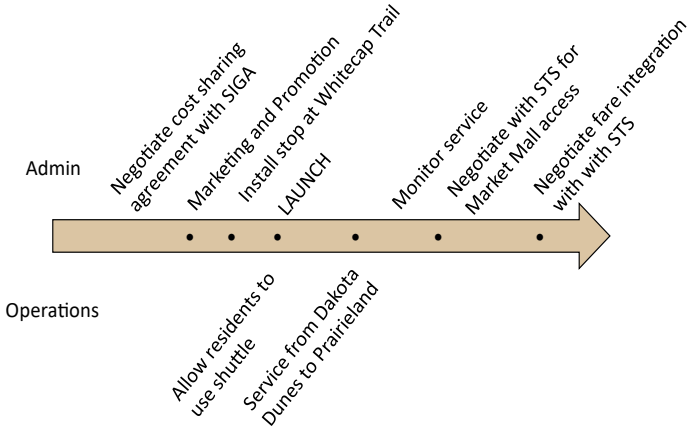

Figure 4 - WDFN Implementation Stage 1A

Trips to the resort from within the community will also support connections to the Saskatoon-Whitecap shuttle for commuters working in Saskatoon, commuters working within the community other than the resort, and for general purpose trips to and from Saskatoon. An additional stop within the community and at the Market Mall in Saskatoon will be added to facilitate these trips directly on the shuttle.

Accessibility and Affordability

Accessibility will be ensured through the provision of accessible vehicles and improvements to local community infrastructure. App-based booking software for local trips will be supplemented by telephone call centre support for people unable to use the mobile phone or online booking technology.

Performance Metrics

Performance metrics for the service will be monitored to ensure project objectives are being met. These will include:

- Overall ridership
- WDFN community ridership as a share of shuttle ridership
- Increase in community-based trips
- Community-based employment trips
- Cost per trip
- Community outreach response

Program Funding and Governance

Planning for the service was funded through the Rural Transit Solutions Fund (Planning Stream). Capital purchases of new vehicles (replacements), bus stop and access infrastructure, mall are signage and booking software will be included in an upcoming application to the RTSF capital projects stream.

In the initial stages of implementation, the existing governance structures will remain, with SIGA responsible for managing and operating the shuttle service and WDFN responsible for local transportation. Other existing services, including school transportation and medical transportation will remain within WDFN's responsibilities, and funded through exiting federal funding programs.

In later stages of the program, the plan recommends that WDFN take responsibility for all transportation services, and SIGA will become a customer of the service. This includes re-organizing all internal transportation administration under one WDFN functional unit, responsible for management and operation of the services, with the possibility of third-party contractors for operations and maintenance of some elements.

5.1.3 State of Montana – Northern Transit Inter-local

Service / Program Description

The Northern Transit Interlocal (NTI) service was established in 2007, to serve the rural area north of Grand Falls MT with one round trip two to four times per week. NTI also provides three trips weekly to the Alberta border at Sweet Grass / Coutts.

Initial ridership in 2008 was about 2,000 trips, increasing steadily to almost 17,000 trips in 2019. Since COVID-19, ridership has been steadily increasing towards 2019 levels.

NTI also provides limited on-demand local service in Shelby and Cut Bank (for local and connecting trips).

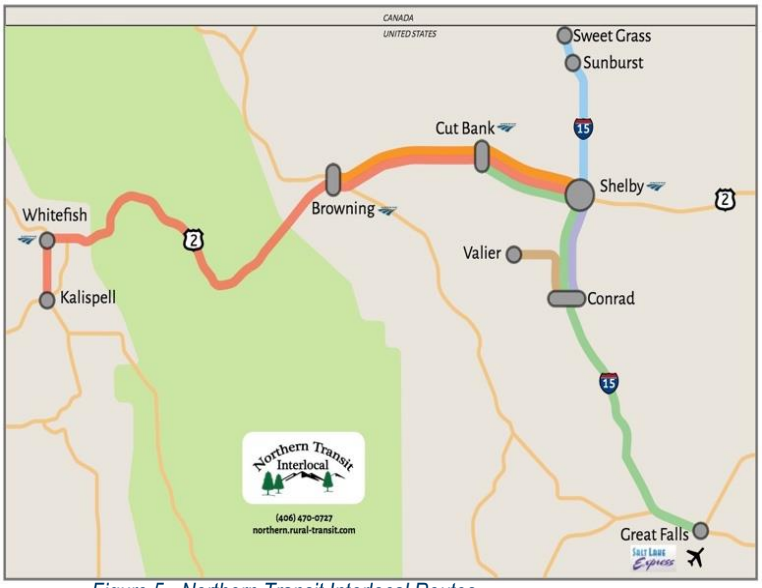

Figure 5 - Northern Transit Interlocal Routes

The Green Route provides twice-weekly connections to regular transit service in Great Falls, as well as the Great Falls International Airport.

Service Principles

The service plan was developed with the following principles:

- Social impact - Public Transportation will continue to grow and develop as long as the routes, schedules and consistency of service match the demographic demands it serves.
- Affordable – fare-free service on all routes
- Service Excellence

Summary of Implemented Policies

Social Impact

Ridership levels grew continuously through 2019 (pre-pandemic), with the introduction of additional trips on selected routes. Additional trips reinforced ridership growth.

Affordability

Service is offered on a donation fare basis to enhance mobility options for area residents. In 2019, fares represented a little less than 1 percent of total revenues. Service is supported by federal and state funds and community businesses and organizations.

Service Excellence

NTI highlights customer service as one of its key features, striving to provide high levels of communication, friendly service, and clean and safe vehicles.

Performance Metrics

NTI does not formally prioritize specific performance standards or objectives. However, as a federal grant recipient, it is required to monitor and report key performance elements including ridership, vehicle-miles traveled, service efficiency and service effectiveness.

Performance had been trending upward to 2019, prior to the pandemic. During the pandemic, efficiency increased due to service cuts, while effectiveness decreased due to ridership losses.

Table 3: NTI Performance metrics, 2019 and 2021

	2019 (pre-COVID-19)	2021 (latest available)
Service Effectiveness		
Cost per trip	17	21.06
Trips per mile	.01	.01
Trips per hour	6.6	3.4
Service Efficiency		
Cost per mile	2.42	2.07
Cost per hour	115.	71.39

Program Funding and Governance

NTI is a not-for-profit organization managed by a Board of Directors representing the three county partners: Toole County Transit (Shelby), Glacier County Transit (Cut Bank), and Pondera County Transit (Conrad). The service is managed and operated by NTI staff.

NTI is largely supported by county and state grants (including administration of US Federal funding) as well as community donations. Pre-pandemic, the 2019 annual budget was about $290,000 USD, funded a little more than 50 percent from federal rural transit funds, administered by the State of Montana. State funds and community donations, particularly from local businesses and agencies, make up the balance of the funding.

5.1.1 Saugeen Mobility and Regional Transit (SMART)

Service / Program Description

The Saugeen Mobility and Regional Transit system serves a number of rural municipalities in southwestern Ontario between Lake Huron and Georgian Bay. While not a cold climate area, this description is offered as an example of a regional service connecting small rural communities with large distances. The specialized service, designed for people with disabilities, serve a population of approximately 60,000 over an area of about 6,000 square kilometres. Service is provided between any two member municipalities, up to 20 kilometres beyond the boundaries of a member municipalities and between member municipalities and to three designated dialysis clinics in more distant centres.

This regional service has operated in one form or another since 1977. Service is provided by a non-profit corporation, governed by a Board of Directors and funded though fares, municipal contributions provincial funding and donations.

The service operates from 6:00 am to 6:00 pm Monday to Thursday and to midnight Friday Saturday. Dialysis trips are provided seven days per week. Prior to COVID-19, annual ridership was approximately 25,000 to 30,000 annually (75 to 100 rides per day). In 2022, ridership had recovered to approximately 80 percent of previous years.

Service is provided by a fleet of 20 accessible cutaway-style vans, operating a total of about one-half million revenue kilometres (2019) and a total of more than one million total kilometres including deadhead distance.

Approximately one-half of passenger trips are for those with a mobility aid; half can walk unassisted. About one-third of trips are provided on a subscription basis (same trip on a regular pattern), about 60 percent are prebooked reservations for individual trips, and about 10 percent are booked same-day (on-demand).

Currently, trips are booked through an online form or by telephone with a toll-free number.

Fares are $2.00 per trip, plus $0.50 per kilometre, with a minimum charge of $7.50. Passengers are allowed to request short stops enroute (without detour) for a $2.50 charge. In 2022, the average fare paid was approximately $12.00 per one-way trip, with an average trip distance of about 15 kilometres. Maximum possible trip distance is about 175 kilometres.

Fares can be paid on-board directly to the driver, but most passengers receive a monthly billing.

Service Principles and Implementation

SMART's transportation service is focussed on mobility. It's current tag line "local and personal" is being updated to "empowering mobility".

- Focus on mobility – the service is designed for those with disabilities that would prevent them from using a conventional transit service. Since most partner municipalities do not have local

transit within their community, and many do not have the medical, professional and commercial services required by residents, the service offers a unique transportation alternative for its clients.

The stop-off capability ($2.50 charge) is unusual among specialized transit service, and reflects passengers' needs to make multiple purpose trips.

The extended hours of service are also unusual for a stand-alone paratransit service, enhancing mobility on Friday and Saturday evenings. Currently, Sunday service is under consideration.

- Financial sustainability – fares are designed to support the service – most specialized transit services have fare recovery ratios fare lower than SMART's with higher municipal contributions.

- Accessible – SMART is committed to safe, modern equipment with a mix of lift-equipped and low-floor vehicles as well as accessible minivans.

Performance Metrics

With a focus on mobility, and financial sustainability, SMART's primary performance metrics are ridership and financial metrics, including cost recovery and cost per trip. Performance in these categories declined substantially during the pandemic since the decision was taken to maintain service levels.

Table 4: SMART Performance metrics, 2018 - 2021

	2018	2019 (pre-COVID-19)	2020	2021
Cost per trip	37.10	37.44	55.37	55.47
Cost/Recovery Ratio	24.6	24.5	17.5	18.2

Program Funding and Governance

Program Funding

As an Ontario transit system, SMART is funded through many of the same mechanisms as other Ontario transit systems. The total annual budget for the service is approximately $1.75M.

- Fares account for approximately 20 per cent of operating revenue. Historically, with higher ridership level pre-Covid, this value was approximately 25 per cent.

- Partner Contributions. Municipal partners contribute on a formula similar to that used for Ontario Gas tax funding, with a population and ridership component based on the previous year's performance. Partner contributions from about 35 percent of operating revenue.

- Ontario Gas Tax program. Ontario's gas tax program funds also account for approximately 35 percent of operating revenues.

- Donations. The remainder of operating revenues, approximately five to ten percent, are derived from community donations, including donations from individuals as well as service agencies.

Governance

SMART is governed by a board of directors comprising an elected representative of each of the member municipalities (currently nine). The Board self-elects its own President and Vice-President from among its members. The Board is served by the SMART Manager and other support staff also responsible for system operations.

Transportation services are provided by SMART-employed operators and service personnel, though much of the maintenance and repair services are contracted to local enterprises.

5.1.2 Key Take-aways (Public Transit Case Studies)

- Agencies policies for measuring success focus on mobility – overall ridership and related performance metrics.

- A good customer experience is crucial – this means appropriate service levels, good connections, adequate infrastructure and amenities and overall safety and comfort.

- Affordability is essential for the success of a public transit service.

- Financial sustainability relies on matching service levels and delivery methods with demand levels.

5.2 Active Transportation Case Studies

This section examines the progress of active transportation development in various renowned winter cities, namely Anchorage, Yellowknife, Oulu, Fort St. John, and Edmonton. This scan encompasses an exploration of different municipalities' transportation governance authorities, the implementation of active transportation plans and policies, the goals and objectives pertaining to active transportation, interjurisdictional planning mechanisms, and the tracking and evaluation of policy efficacy. The aim of the jurisdictional scan is to offer valuable insights and serve as a reference for the advancement of winter active transportation in Yukon.

5.2.1 Anchorage, Alaska

Anchorage, located in the U.S. state of Alaska, holds the distinction of being the largest city in terms of population. As of the 2020 census, it boasted a population of 291,247 residents. Anchorage's prominence in the realm of transportation is derived from its strategic positioning as an international air cargo hub, a significant seaport, a crucial rail connection point, and its association with the Trans-Alaska Pipeline System.

Transportation Governance Structure / Organization

Anchorage's transportation governance structure comprises several pivotal entities and organizations.

- **Municipality of Anchorage**: The Municipality of Anchorage is responsible for the overall governance and administration of transportation within the City. It includes various departments and agencies involved in transportation planning, infrastructure management, and public transit.
- **Anchorage Public Transportation Department**: The Anchorage Public Transportation Department operates the public transit system in the municipality, known as People Mover. They are responsible for managing and providing bus services throughout Anchorage.
- **Transportation Advisory Commission (TAC):** The Transportation Advisory Commission serves as an advisory body to the Mayor of Anchorage. It consists of appointed members who represent various stakeholder groups and provide input on transportation-related matters, including policies, plans, and programs.

Active Transportation Plans / Policies

- **Non-Motorized Transportation Plan (2021)**: The plan aims to improve walking, cycling, and other non-motorized modes of transportation. The plan outlined strategies for enhancing infrastructure, improving safety, and increasing active transportation options throughout the City.
- **2035 Metropolitan Transportation Plan (2012)**: The US Federal Highway Administration (FHWA) requires the Municipality to have an MTP, to be updated every four years. It covers all modes of transportation, including freeways, highways, streets and sidewalks, public transit, trails and freight mobility, and address congestion management and air quality standards.
- **Complete Streets Policy:** Anchorage has a Complete Streets policy, which aimed to ensure that streets are designed and operated to accommodate all users, including pedestrians, cyclists, and public transit users. The policy encouraged the inclusion of features such as sidewalks, bike lanes, crosswalks, and transit amenities in street design and construction projects.
- **Anchorage Bicycle Plan (2010):** The plan provided a comprehensive framework for developing and expanding the City’s bicycle infrastructure. The plan identifies priority projects, outlines design guidelines, and recommend policies to support safe and accessible active transportation.
- **Safe Routes to Schools Manual:** Anchorage adopts the Safe Routes to School program, which aims to improve safety and encourage walking and biking among students. The

program includes infrastructure improvements near schools, educational campaigns, and encouragement activities to promote active transportation to and from schools.

Active Transportation Goals / Objectives

Anchorage is dedicated to establishing a comprehensive, interconnected, and uninterrupted network for non-motorized transportation. This entails the development of sidewalks, improved shared roadways, segregated bikeways, shared-use pathways, side paths, and additional bicycle facilities. The city's objectives and goals regarding active transportation encompass the following:

- **Increase the use of non-motorized system**. Increase the number of non-motorized network users and miles of non-motorized facilities. Allocate funding for non-motorized facilities and expanding facilities in areas that are deficient. Reduce car use on roadways by providing incentives for non-motorized transportation and infrastructure changes. Provide support facilities and amenities.
- **Promote and improve health and quality of life**. Improve health and livability by providing safer, connected, and accessible facilities and increasing people's everyday activity. Promote active transportation as a community health priority and improve environmental health using green infrastructure.
- **Improve safety and security**. Prioritize bicycle and pedestrian safety in planning and design of roadways and trails for all ages and abilities. Aim to reach zero injuries and deaths for non-motorized users. Minimize user conflicts between non-motorized users and vehicles through education, signage, and design. Improve lighting for non-motorized facilities, routes, and crossings.
- **Optimize maintenance for all seasons**. Expand and enhance maintenance in all seasons on all facilities, both on roadways and on shared use pathways. Prioritize winter maintenance on the most traveled routes. Educate the public on maintenance priorities and their responsibilities. Prioritize winter maintenance to improve access to public transportation facilities. Prioritize winter maintenance on a citywide network of routes for people of all ages and abilities.
- **Connect communities through all modes to all destinations**. Prioritize making links in the network where there are opportunities to connect to other modes such as public transit. Measure non-motorized use and assets. Provide safer bicycle and pedestrian connections to destinations, such as schools; parks and playgrounds; shopping and employment centers; public facilities; and natural and recreational areas. Provide an efficient (direct), all season system that connects people to their destinations.
- **Measure non-motorized use and assets**. Develop metrics to evaluate non-motorized transport performance, involving health, economic benefits, performance of maintaining and funding. Establish and monitor annual counts on different types of routes and update and maintain inventory database.
- **Build community through education and involvement**. Encourage walking / cycling culture and support in communities. Educate and increased the awareness of multiple users types.

Inter-Jurisdictional Planning Mechanisms

Metropolitan Planning Organization (MPO): Anchorage is part of the Anchorage Metropolitan Area Transportation Solutions (AMATS), the designated MPO for the region. AMATS is responsible for coordinating transportation planning efforts among multiple jurisdictions, including the Municipality of Anchorage, the State of Alaska, and other local agencies. The MPO develops the Metropolitan Transportation Plan (MTP), which guides transportation investments and policies for the Anchorage area.

Alaska Department of Transportation and Public Facilities (DOT&PF) leads statewide transportation planning efforts, which involve collaborating with municipalities, including Anchorage, and other entities. The DOT&PF develops the Alaska Statewide Transportation Improvement Program (STIP) and Long-Range Transportation Plan (LRTP), which outline transportation priorities and investments across the state.

Municipality of Anchorage and the **Alaska Railroad Corporation** coordinate efforts to provide transit services in the region. They work together to plan and optimize bus routes, schedules, and transit infrastructure to enhance connectivity and accessibility within and around Anchorage.

Policy Efficacy Tracking and Measurement

As per the **Alaska Statewide Active Transportation Plan** (2019), a statewide **active transportation count program** is proposed to align with the FHWA Traffic Monitoring Guide (2016). The State also endeavors to conduct an inventory and establish a comprehensive database of current active transportation facilities on roads managed by DOT&PF, with focus on:

- An inventory and map of existing active transportation facilities on roads managed by DOT&PF.
- An inventory of network gaps and connections across the whole transportation network.

In the Transportation Assessment of **Alaska Moves 2050**, DOT&PF uses a set of performance measures to track progress toward achievement of goals and objectives related to active transportation.

- **Safety Performance Measure**: Reduction in the number of fatal or serious injury collisions involving bicyclists and pedestrians in the last five years, as both a rolling average and percentage of total collisions.
- **Health Performance Measure**: Percent change in average minutes of physical activity per day per capita over a five-year period, as measured by the Alaska Department of Health and Social Services; Percentage of health regions meeting Healthy Alaska Benchmarks by 2020.
- **Maintenance / System Preservation Performance Measure**: Miles of roadway adopted through Adopt-a-Road and Adopt-a-Highway initiatives.
- **Connectivity Performance Measure:** Miles of state-owned active transportation facilities, including trails, sidewalks, designated bicycle facilities, and road shoulders.
- **Economic Development**: Number of communities with current active transportation plans and Safe Routes to Schools programs or plans. Percent of commute trips completed by walking or bicycling, as determined by American Community Survey data.

5.2.2 Yellowknife, NT

Yellowknife, situated in the Northwest Territories of Canada, serves as the capital, largest community, and sole city in the region. According to the 2021 Canadian Census, Yellowknife is home to a population of 20,340 individuals.

Transportation Governance Structure / Organization

City of Yellowknife: The City of Yellowknife is responsible for the overall management and planning of transportation within the City limits. This includes the maintenance and operation of local roads, traffic management, parking management, and transportation infrastructure development.

Yellowknife Transit: Yellowknife Transit, operated by the City of Yellowknife, is responsible for managing the public transit system within the City. It oversees the operation of bus routes, schedules, fare collection, and service improvements.

Yellowknife Airport Authority: The Yellowknife Airport Authority manages and operates the Yellowknife Airport (YZF), which is the major transportation hub for air travel in the region. It collaborates with various airlines and organizations to ensure efficient air transportation services.

Active Transportation Plans / Policies

The City of Yellowknife has undertaken a **5 Year Bike Lane Development Plan** aimed at incorporating bike lanes on city roads as part of its active transportation initiative. Additionally, the City has formulated an active transportation strategy that prioritizes the development of bike lanes. These initiatives align with the **2020 Community Plan** and the **Smart Growth Development Plan**, further supporting the integration of bike lanes and promoting active transportation within the City.

Way to Go – Yellowknife Bike Routes has been commissioned to map the bike routes utilized by Yellowknife residents. Their objective is to offer recommendations to the City, aiding in the prioritization and budgeting of improvements. Additionally, their role involves promoting these routes to both residents and visitors. The efforts of Way to Go align with the City of Yellowknife's **Community Energy Plan** from 2006 and the **Integrated Parks, Trails, and Open Space Development Plan** from 2005. The Yellowknife Community Energy Plan proposes significant changes to the comprehensive approach towards energy usage. It emphasizes the need to consider all aspects of energy use and encourages sustainable practices. The Integrated Parks, Trails, and Open Space Development Plan outlines a vision for Yellowknife to be at the forefront of Canada's green commuting initiatives. The plan envisions a city where citizens can safely navigate throughout the urban area using non-vehicular alternatives, promoting active transportation, and reducing reliance on vehicles.

The Bicycle Routing for the City of Yellowknife: Increasing Commuter and Recreation Bicycling plan prioritizes safety and presents recommendations for a proposed bicycle routing strategy. It also addresses key elements such as bicycle lane design, signage issues, and outlines plans for future improvements. The primary goal of the plan is to enhance safety for cyclists while promoting both commuter and recreational bicycling in Yellowknife. By establishing a well-designed bicycle routing system, the plan aims to encourage more people to choose cycling as a mode of transportation and recreation.

The above-mentioned Yellowknife's bike-related plans underscore the importance of integrating cycling infrastructure with public roadways and multi-use trails. When planning bike routes, careful consideration is given to ensuring accessibility to destinations such as workplaces, shopping areas, schools, and community events. This involves incorporating necessary infrastructures like signs, bike racks, and designated multi-use trails. The plans also prioritize ongoing facility maintenance, organizing promotion events to encourage cycling, and clarifying and modifying the rules of the road to accommodate cyclists. By addressing these aspects comprehensively, Yellowknife aims to create a bike-friendly environment that supports safe and convenient cycling for residents and visitors alike.

Yellowknife's **Trail Enforcement and Connectivity Strategy**, introduced in 2018, focuses on the evaluation of the city's current trail network with a particular emphasis on active transportation. The strategy was initiated by the City as part of its commitment to fostering an inclusive community, ensuring that all residents have the opportunity to actively participate in the social, economic, and cultural aspects of Yellowknife. The strategy aims to enhance trail connectivity, promote active transportation, and create an environment that encourages community engagement and accessibility for all.

Active Transportation Goals / Objectives

Well connected network. An effective network includes on-street and off-street facilities, which provides convenient access between key destinations in the community while mitigating conflicts between users.

Well designed facilities. Include a range of on-street and off-street options, reflecting the realities of the site and the opportunities to accommodate various types of cyclists. Bicycle facilities are ideally implemented with capital improvements such as streetscaping and traffic calming.

Well designed signage. Wayfinding signage directs cyclists to key destinations throughout the community's cycling network. Regulatory signage describes how bicycle facilities are to be used and how cyclists are to share roads and paths with motorists and other users.

Responsive & Sustainable Operations. Maintaining bicycle facilities is crucial in providing safe access for cyclists and encouraging use by the broad public. Maintenance of lanes and other facilities in winter settings is of particular note and deserving of careful on the ground consultation with users and City departments.

Effective communication. Educating the public on new cycling facilities is key in raising awareness and can range from online notices to videos to print ads to on-site signage.

Inter-Jurisdictional Planning Mechanisms

Department of Infrastructure, Government of the Northwest Territories (GNWT): The Department of Infrastructure at the territorial level plays a significant role in transportation governance in Yellowknife. It is responsible for the planning, design, construction, and maintenance of territorial highways and bridges, including those that connect Yellowknife with other communities in the Northwest Territories.

Federal Government: Yellowknife engages with various federal government departments and agencies, such as Transport Canada, on transportation planning matters. This can include funding for transportation projects, regulatory compliance, and coordination of transportation policies and

initiatives. Meanwhile, GNWT also emphasizes supporting connecting to territorial and national objectives like:

- Improving the transportation system helps to build a strong and sustainable future for the NWT (***Priorities of the NWT's 17th Legislative Assembly***).
- Improving transportation systems across northern Canada is integral to promoting social and economic development, and to exercising our Arctic sovereignty (***Canada's Northern Strategy***).
- Reliable, efficient and cost-effective transportation services greatly help to strengthen and diversify the NWT economy by stimulating investment, expanding potential, enhancing communities, building sectors using regional strengths, establishing a positive entrepreneurial environment and preparing NWT residents for employment opportunities (***NWT Economic Opportunities Strategy***).
- Accessibility via the transportation system is an important component of land use. The availability and capacity of the transportation system influences current and future land uses (***NWT Land Use and Sustainability Framework***).

Indigenous and Northern Affairs Canada (INAC): As Yellowknife is located within the Northwest Territories, INAC plays a role in transportation governance, particularly in the context of Indigenous communities and infrastructure development in the region.

Policy Efficacy Tracking and Measurement

The **Northwest Territories Transportation Strategy** proposes Evaluation Framework and Transportation Report Card, involving three measures at a macro level:

- **Measure 1. Strengthening Connections** – Transportation infrastructure and services continue to improve.
- **Measure 2. Capturing Opportunities** – Transportation infrastructure and services continue to expand.
- **Measure 3. Embracing Innovation** – Transportation programs, policies and services continue to improve.

The Strategy is accompanied with a Transportation Report Card, which is an evaluation framework that includes statistics that provide a benchmark to measure the Department of Transportation's success.

Yellowknife's **Trail Enhancement and Connectivity Strategy** proposes monitoring and evaluation plans for active transportation actions. The indicators include:

- Kilometers of city trails. Assess annually.
- Infrastructure, involving the total number of bike racks, benches, public washrooms. Assess annually.
- Mode share, involving percentage who use active transportation to commute. Assess every 5 years.
- Bike friendly transit: bicycles permitted on buses.

5.2.3 Oulu, Finland

Oulu, located in the North Ostrobothnia region of Finland, is a city and municipality renowned for its seaside resort status and a population of approximately 210,000 inhabitants. Given its substantial population and its significant economic and cultural significance in the region, Oulu has earned the moniker "capital of Northern Finland." Notably, Oulu is distinguished by its extensive transportation network designed explicitly for non-motorized modes of travel, such as pedestrians and bicycles, commonly referred to as "light" traffic in Finland. In 2022, the city boasted over 950 kilometers of dedicated pathways and more than 300 underpasses and bridges exclusively catering to pedestrian and bicycle traffic. This comprehensive network is utilized throughout the year. In fact, Oulu boasts the highest ratio of walking and cycling pathways per resident in Finland, with a cycling mode share of 20 percent. Oulu is often praised as an exceptional city for cycling, even during the winter months.

Transportation Governance Structure / Organization

The transportation governance structure in Oulu, Finland, involves various entities and organizations that play key roles in transportation planning and management.

- **Oulu City Council**: The Oulu City Council is responsible for setting transportation policies and strategies for the City. It consists of elected representatives who make decisions and set the direction for transportation planning and development in Oulu.
- **Oulu City Executive Board**: The City Executive Board, also known as the City Government, is responsible for implementing the decisions made by the City Council. It oversees the day-to-day operations of the City, including transportation-related activities.
- **Oulu City Transport Services**: Oulu City Transport Services (Oulun joukkoliikenne) is responsible for the provision of public transportation services in Oulu. It manages the bus network, schedules, fares, and other aspects of public transportation to ensure efficient and reliable services for residents and visitors.
- **Oulu City Planning Department**: The City Planning Department in Oulu is responsible for urban planning, including transportation planning and infrastructure development. It prepares land use plans, designs transportation networks, and coordinates with other departments and stakeholders to ensure sustainable and efficient transportation systems.

Active Transportation Plans / Policies

Oulu has seen bicycling and pedestrian issues mainstreamed within local policies and planning. Finland’s planning environment is based on **master planning of large areas,** with traffic engineers carrying out most transport-related aspects. In Oulu, traffic engineers work closely with master planners to ensure cycling routes are integrated into new housing areas from the outset and not as an afterthought.

The **infrastructure-related policies** in Oulu are particularly impressive. Oulu has an extensive pathway network of over 620 kilometers, most of which is separated from automobile traffic, and meticulously maintained in the winter months. Oulu’s maintenance practices facilitate year-round cycling. New housing areas are required to be part of the pathway network.

Oulu's **Bicycle Traffic Enhancement Program** aims to reducing discontinuities in the central city, and re-surfacing sand and gravel pathways with tarmac. Commitments are also made to efficient winter maintenance, concentrating on slip-reduction and intersection maintenance.

Oulu also has a **special fund** in place for the construction of walking and cycling infrastructure. These highway funds were specifically used for expensive capital projects including constructing underpasses and pathways.

ITS Oulu is the City's platform for intelligent transport strategy, action network and pilots. The project emphasizes on developing low carbon transport systems and modes of transport as well as low carbon test platforms. In addition, the introduction of new low carbon products and services and innovative solutions is supported. The project aims to make a positive contribution to reducing the need for mobility and the integrity of urban structure.

Active Transportation Goals / Objectives

Oulu's primary objective regarding active transportation has been to establish a comprehensive pedestrian and bicycle network that encompasses the entire urbanized area, extending into neighboring municipalities. To support winter cycling, efforts were made to expand bicycle parking facilities with improved coverage for protection from the elements. Additionally, initiatives were launched to encourage the combined use of cycling and public transit, promote bicycle rentals, develop a public bicycle map, and introduce guided bicycle tours. These actions aim to enhance the accessibility and attractiveness of cycling as a sustainable mode of transportation in Oulu.

Inter-Jurisdictional Planning Mechanisms

Finnish Transport Infrastructure Agency (FTIA): The FTIA (Liikennevirasto) is a national agency responsible for the planning, construction, and maintenance of the national transport infrastructure, including highways and railways. It works closely with regional and municipal authorities, including Oulu, to coordinate transportation projects and infrastructure development.

Oulu Regional Council: The Oulu Regional Council is a regional authority responsible for regional development and planning in the Oulu region. It coordinates transportation planning efforts, establishes regional transport policies, and promotes collaboration between municipalities in the region. The Council's **Regional Strategic Plan and Regional Programme** sets out the general long-term development aims and associated strategies for the region. The programme also outlines the central development projects for the following four-year period.

Policy Efficacy Tracking and Measurement

Based on research[8] tracking Oulu's active transportation policy and practice, it is evident that Oulu's transportation policy has played a substantial role in the city's remarkable progress in active transportation development over the past two decades.

Urban form development: The active transportation policies implemented in Oulu have made a significant impact on the development of the city center, particularly regarding the density of

[8] Kärmeniemi, Mikko., Lankila, Tiina., Rönkkö, Emilia. et al., Active transportation policy and practice in the city of Oulu from 1998 to 2016—A mixed methods study, The Journal of Transportation and Land Use, Vol. 15, No. ,1 [2022] pp. 689–708

buildings, residents, and workplaces. The policies have contributed to the growth and vitality of the inner city, while the effects in the outer urban area and urban fringe have been less pronounced. Furthermore, these policies have facilitated a more integrated function mix within the city center. Prior to the implementation of these policies, there was a clear separation of different functions, with distinct zones dedicated to commerce, housing, and workplaces. The advancements in active transportation have played a pivotal role in achieving a balanced land use in the city center, fostering a harmonious combination of residential, commercial, and employment spaces. Consequently, the development of active transportation has yielded additional benefits such as improved service levels, increased housing options, and enhanced employment opportunities.

Increase of the urban form density, mix and access networks (DMA): There is a clear association between the expansion of the urban DMA and the rise in walking and cycling as preferred modes of transportation, while car usage has notably decreased. Oulu has experienced significant advantages from the noticeable expansion of the urban DMA and the subsequent reduction in reliance on cars, which can be attributed to the introduction of active transportation policies.

5.2.4 Fort St. John, BC

Fort St. John is a vibrant city situated in northeastern British Columbia, Canada. It holds the distinction of being the most populous municipality in the Peace River Regional District. The city covers an expansive area of approximately 22 square kilometres and is home to a diverse community of approximately 21,465 residents, as recorded in the 2021 Census. Strategically positioned at Mile 47 of the historic Alaska Highway, Fort St. John holds a significant geographical advantage. It serves as one of the major urban centers along the route stretching from Dawson Creek, British Columbia, to Delta Junction, Alaska. This key location has contributed to the city's growth and prominence over the years.

Transportation Governance Structure / Organization

Fort St. John City Council: The City Council plays a vital role in transportation-related decisions, policies, and planning within the City.

Local Transportation Department: The Transportation Department within the City Administration is responsible for the planning, development, and maintenance of transportation infrastructure, including roads, sidewalks, and bike lanes. They also collaborate with other agencies and stakeholders on transportation-related projects and initiatives.

Winter Strategy Team: The Winter City Strategy Team was comprised of local stakeholders, City staff and Officials. The purpose was to bring together a diverse group of individuals with unique perspectives, insights and ideas to work together in identifying ways in which Fort St. John can become a model winter city.

Active Transportation Plans / Policies

Winter City Micro-Project Strategy: The intent of micro-projects is to provide readily implementable initiatives that require less resources but generate positive impacts on the winter living experience in Fort St. John. The micro-projects that could benefit active transportation include

but not limited to Shovel Your Street Competition, Community Trail Lighting, Warming Huts, Bus Shelter Upgrades, etc.

Winter City Design: Continuous building facades with awnings, signage, and warm colours create visual interest and pedestrian scale. Add feature lighting as one of the most effective ways to create a special winter atmosphere and increase comfort and safety. Use street trees to reduce wind speed and provide separation between pedestrians and cars. Provide wider curb-side lanes allowing for bicycles in the summer and temporary snow storage in the winter. Slightly raise pedestrian street crossings to slow traffic and eliminate curb-side accumulation of snow melt or ice formation.

In the City's **Official Community Plan** (OCP) and **Transportation Master Plan**, the City aims to provide an efficient multi-modal transportation network that enhances quality of life by supporting environmental, economic and social sustainability to make community vibrant, safe and accessible.

Active Transportation Goals / Objectives

The City aims to improve mobility options that cater to individuals of all ages and abilities, with a particular focus on prioritizing safety and health. Additionally, the City endeavors to integrate transportation and land use effectively. Specifically, regarding active transportation, these goals translate into:

- **Pedestrian plan**: enhance sidewalk coverage focusing on the downtown, school zones and recreation and park areas; add supportive pedestrian facilities and amenities such as wider 2.0 m sidewalks, setback sidewalks, lighting, seating and trees. Improve crossings and accessibility features.
- **Bicycle & trails plan**: develop and expand the bicycle network making use of facilities such as multi-purpose trails, dedicated bicycle routes, and shared travel lanes; use signage, pavement markings and signals to improve safety at crossings; develop and implement bicycle parking strategy.

The City of Fort St. John has made it a priority to cultivate vibrancy, sustainability, and resiliency within the community through a strategic initiative. Acknowledging the significant seasonal variations in Fort St. John, proactive planning plays a crucial role in achieving these objectives. Implementing climate-sensitive design strategies is essential for enhancing the winter experience by adapting to the unique characteristics of the northern environment. Rather than replicating year-round summer conditions, the aim is to capitalize on the distinctive opportunities presented by the northern region and create a winter environment that is safe, comfortable, and enjoyable. Thoughtful site planning, well-designed buildings, streets, and parks all contribute to addressing the challenges posed by winter weather factors while promoting a sense of comfort and well-being during the winter months.

Inter-Jurisdictional Planning Mechanisms

Ministry of Transportation and Infrastructure (MOTI): At the provincial level, the MOTI is responsible for managing and maintaining the provincial transportation network, including highways, bridges, and transportation policies. They work closely with local governments, including Fort St. John, to coordinate transportation planning and infrastructure development.

Regional District: Fort St. John is located within the Peace River Regional District (PRRD), which is a regional governing body responsible for various services, including transportation planning,

land-use planning, and rural road maintenance. The regional district may collaborate with the City of Fort St. John on transportation-related matters that extend beyond the City's boundaries.

BC Transit: In Fort St. John, the BC Transit Authority operates public transit services, including buses, within the City and the surrounding region. BC Transit works in partnership with the City of Fort St. John to plan and deliver transit services based on the City's needs and priorities.

Policy Efficacy Tracking and Measurement

The **City's Micro-Project Implementation Plan** emphasizes the importance of continuous monitoring and review of micro-project implementation to address any potential issues that may arise. It aims to recognize the successes of micro-projects to inform future winter seasons and provide valuable insights for the Winter Strategy Team's future initiatives. The recommended winter city coordinator would assume the responsibility of monitoring and reviewing these projects.

In line with the City's **Official Community Plan (OCP),** ongoing monitoring and evaluation are proposed to assess the extent to which the vision, goals, and objectives outlined in the plan are being achieved through the implemented policies. The efficacy tracking and evaluation process allows the City to make necessary adjustments during the plan's duration to better align with the community's needs. To monitor the plan effectively, a range of criteria, checklists, indicators, and units of measurement are utilized.

By employing systematic monitoring and evaluation practices, the City can ensure that its micro-projects and policies align with the intended outcomes and adapt as necessary to best serve the community.

5.2.5 Edmonton, AB

Edmonton, the capital city of Alberta, is positioned along the North Saskatchewan River and serves as the central hub of the Edmonton Metropolitan Region within Alberta's central region. It acts as the northern anchor of the "Calgary–Edmonton Corridor," a region as defined by Statistics Canada, encompassing the area between Edmonton and the city of Calgary, including numerous smaller municipalities. In 2021, the city of Edmonton had a population of 1,010,899, while the Edmonton Metropolitan Area had a population of 1,418,118, ranking it as the fifth-largest city and the sixth-largest metropolitan area in Canada.

Transportation Governance Structure / Organization

City of Edmonton: At the municipal level, the City of Edmonton takes the lead in transportation governance.

Local Transportation Department: The city’s Transportation Department is responsible for planning, designing, and operating transportation infrastructure within the city limits. This includes roads, sidewalks, cycling infrastructure, and traffic management.

Public Transit Authority: Edmonton's public transit system, known as Edmonton Transit Service (ETS), is responsible for operating bus and LRT (Light Rail Transit) services within the city. ETS is a department of the City of Edmonton and falls under the authority of the Transportation Department.

WinterCity Office / Think Tank: The WinterCity Office in Edmonton was established to enhance and promote the city's livability and vibrancy during the winter months. It focuses on developing initiatives and strategies to make Edmonton a more enjoyable place for residents and visitors during the winter season.

Active Transportation Plans / Policies

The City of Edmonton has developed a comprehensive roadmap to foster a strong sense of community and promote innovative thinking, ultimately establishing itself as a world-leading winter city. To support this vision, the City has published the Winter City Strategy, Implementation Plan, and Design Guidelines. These documents outline the strategic direction and specific actions to enhance the city's winter experience, addressing various aspects such as infrastructure, urban design, community engagement, and cultural initiatives. By implementing these plans, the City aims to create an exceptional winter city that embraces and celebrates the unique opportunities and challenges presented by the winter season.

WinterCity Strategy: Edmonton's WinterCity Strategy laid the groundwork for thinking and acting differently in the City in order to minimize winter's negative aspects and create a more livable, vibrant city year-round.

WinterCity Strategy Implementation Plan: the implementation plan is a detailed map for transforming Edmonton into a more inviting, vibrant, and prosperous place for residents, business, industry and tourists throughout the winter months, while still being true to heritage and the connection to nature and the environment. There are 64 actions in the plan falling under the City's WinterCity Strategy. The actions have been prioritized and a matrix has been used to determine the effort required and ultimate impact of action.

Winter Design Guidelines: The guidelines apply the concept of "Winter Lens" - a way of seeing developments and designs from a winter perspective. The City's winter design guidelines provide flexible guidance and inspiration for future development decisions throughout Edmonton. The guidelines are intended to facilitate leading-practice urban design solutions with a winter lens to transform Edmonton into a great year-round city. The five winter city design principles are:

- Incorporate design strategies to block wind, particularly prevailing winds, and downdrafts.
- Maximize exposure to sunshine through orientation and design.
- Use colour to enliven the winterscape.
- Create visual interest with light, while being mindful of intensity, spread, contrast and colour.
- Design and provide infrastructure that supports desired winter life and improves comfort and access in cold weather.

Active Transportation Goals / Objectives

Edmonton's WinterCity Strategy is designed with the ambition of establishing a globally recognized northern city. The strategy comprises ten distinct winter city goals that align with the overarching principles of authenticity, attitude transformation, and sustainability. These goals are organized under four key pillars, which serve as the foundation for Edmonton's winter city development:

Winter Life: (1) Make it easier to "go play outside": provide more opportunities for outdoor activity. (2) Improve winter transportation for pedestrians, cyclists and public transit users.

Winter Design: (3) Design communities for winter safety and comfort. (4) Incorporate urban design elements for winter fun, activity, beauty and interest.

Winter Economy: (5) Increase the capacity and sustainability of Edmonton's winter festivals. (6) Develop a four-seasons patio culture. (7) Become a world leader in innovative winter–related business/industry.

Winter Story: (8) Celebrate the season and embrace daily living in a cold climate. (9) Promote Edmonton's great northern story locally, nationally and internationally. (10) Kick start and lead implementation of Edmonton's WinterCity Strategy: apply a 'Winter Lens' to the City.

Inter-Jurisdictional Planning Mechanisms

Edmonton Metropolitan Region Board (EMRB): The Edmonton Metropolitan Region encompasses several municipalities in the surrounding area. The regional transportation planning and governance are carried out through the EMRB. The EMRB collaboratively develops transportation plans and strategies to ensure coordinated and efficient transportation across the region.

Government of Alberta: The Government of Alberta plays a role in transportation governance through various departments. Alberta Transportation oversees the overall transportation system in the province, including highways and major transportation projects. They work closely with the City of Edmonton and other municipalities to coordinate transportation planning and funding.

Policy Efficacy Tracking and Measurement

The City has released the **WinterCity Strategy Evaluation & Report**, which encompasses the actions and outcomes of the initial three years of the WinterCity Implementation Plan (Fall 2013 – Fall 2016). The objective was to establish a comprehensive evaluation framework that encompasses multiple dimensions to assess the attainment of WinterCity Strategy objectives. This evaluation framework includes a set of questions corresponding to each WinterCity Strategy Pillar, enabling the measurement of the Strategy's relevance, effectiveness, impact, and efficiency. The framework also suggests data collection methods, identifies potential partners and data sources, and serves as a guide for the formal evaluation process.

5.2.6 Summary of AT Jurisdiction Scan

The master table presented below offers a concise summary and comparison of active transportation governance, implemented plans/policies, established goals/objectives, inter-jurisdictional planning mechanisms, and policy efficacy assessment across different jurisdictions:

Table 5. Summary of Different Jurisdiction's Active Transportation Governance and Policies

Jurisdiction	Transportation Governance	Implemented AT Plans/Policies	Established AT Goals/Objectives	Inter-jurisdictional Planning	Policy Efficacy Assessment
Anchorage, Alaska	Municipality of Anchorage. Anchorage Public Transportation Department. Transportation Advisory Commission	Non-Motorized Transportation Plan. 2035 Metropolitan Transportation Plan. Complete Streets Policy. Anchorage Bicycle Plan. Safe Routes to Schools Manual	Increase the use of non-motorized system. Promote and improve health and quality of life. Improve safety and security. Optimize maintenance for all seasons. Connect communities through all modes to all destinations. Measure non-motorized use and assets. Build community through education and involvement	Metropolitan Planning Organization (MPO). Alaska Department of Transportation and Public Facilities (DOT&PF). Alaska Railroad Corporation	State active transportation count program. State Inventory and map of active transportation facilities and network gaps. Alaska Moves 2050's performance measures: •Safety Performance •Health Performance •Maintenance / System Preservation Performance •Connectivity Performance •Economic Development
Yellowknife, NT	City of Yellowknife. Yellowknife Transit Yellowknife Airport Authority	5 Year Bike Lane Development Plan. Way to Go – Yellowknife Bike Routes. The Bicycle Routing for the City of Yellowknife: Increasing Commuter and Recreation Bicycling Trail Enforcement and	Well-connected network. Well-designed facilities Well-designed signage Responsive & Sustainable Operations. Effective communication	Department of Infrastructure, Government of the Northwest Territories (GNWT) Federal Government •Priorities of the NWT's 17th Legislative Assembly •Canada's Northern Strategy	Northwest Territories Transportation Strategy Evaluation Framework and Transportation Report Card. •Measure 1. Strengthening Connections - Transportation infrastructure and services continue to improve. •Measure 2. Capturing Opportunities - Transportation infrastructure and

Jurisdiction	Transportation Governance	Implemented AT Plans/Policies	Established AT Goals/Objectives	Inter-jurisdictional Planning	Policy Efficacy Assessment
		Connectivity Strategy		•NWT Economic Opportunities Strategy •NWT Land Use and Sustainability Framework •Indigenous and Northern Affairs Canada (INAC)	services continue to expand. •Measure 3. Embracing Innovation – Transportation programs, policies and services continue to improve. Trail Enhancement and Connectivity Strategy monitoring and evaluation plans •Kilometers of city trails. •Infrastructure, involving the total number of bike racks, benches, public washrooms. •Mode share, involving percentage who use active transportation to commute. •Bike friendly transit: bicycles permitted on buses.
Oulu, Finland	Oulu City Council. Oulu City Executive Board. Oulu City Transport Services. Oulu City Planning Department	Infrastructure-related policies. Bicycle Traffic Enhancement Program. Special fund for walking and cycling infrastructure. ITS Oulu	Establish a comprehensive pedestrian and bicycle network that encompasses the entire urbanized area, extending into neighboring municipalities. Support winter cycling and enhance the accessibility and attractiveness of	Finnish Transport Infrastructure Agency (FTIA). Oulu Regional Council	Urban form development: the density of buildings, residents, and workplaces and the function mix of land use. Increase of the urban form density, mix, and access networks (DMA).

Jurisdiction	Transportation Governance	Implemented AT Plans/Policies	Established AT Goals/Objectives	Inter-jurisdictional Planning	Policy Efficacy Assessment
			cycling as a sustainable mode of transportation.		
Fort St. John, BC	Fort St. John City Council. Local Transportation Department. Winter Strategy Team	Winter City Micro-Project Strategy. Winter City Design. Official Community Plan (OCP) and Transportation Master Plan	Cultivate vibrancy, sustainability, and resiliency within the community. Improve mobility options that cater to individuals of all ages and abilities. Integrate transportation and land use effectively. Capitalize on the distinctive opportunities presented by the northern region and create a winter environment that is safe, comfortable, and enjoyable	Ministry of Transportation and Infrastructure (MOTI). Peace River Regional District (PRRD). BC Transit	Continuous monitoring and review of micro-project implementation (from Micro-Project Implementation Plan). Assess the extent to which the vision, goals, and objectives are being achieved through the implemented policies (from OCP).
Edmonton, AB	City of Edmonton. Local Transportation Department. Public Transit Authority. WinterCity Office / Think Tank.	WinterCity Strategy. WinterCity Strategy Implementation Plan. Winter Design Guidelines.	Winter Life. Winter Design. Winter Economy. Winter Story.	Edmonton Metropolitan Region Board (EMRB). Government of Alberta.	WinterCity Strategy Evaluation & Report

5.2.7 Key Take-aways (AT Case Studies)

- Strong Provincial (Statewide in the US) leadership, planning and legislation to mandate inter-jurisdictional collaboration (i.e., regional coordination, planning, performance monitoring).

- Regional partnerships and strong regional mandate and jurisdictional responsibilities are a common theme among case studies reviewed. This regional bodies carry out transportation planning and governance collaboratively among member municipalities, developing regional plans and strategies to ensure coordinated and efficient transportation across the region including public transit and active transportation.

- Having a Winter-City Strategy and/or Office within the organization have proven advantageous for promoting AT projects, best practices, education, and awareness internally and externally.

- At a minimum, local municipalities have developed AT municipal plans to be updated every 5-years (recommended).

- For FN communities, Territorial leadership and collaboration with the Federal Government and the INAC is especially critical to align local needs with available funding and programs.

6. YUKON CLIMATE CHANGE AND POLICY CONTEXT

6.1 Our Clean Future

A Yukon strategy for climate change, energy, and a green economy. It establishes a vision, values and priority areas that should be the focus over the next 10 years to respond to the climate emergency. The Government of Yukon developed the strategy in partnership with Yukon First Nations, transboundary Indigenous groups and Yukon municipalities over the course of 3 years.

The strategy lays out specific, tangible actions that the Government of Yukon will take to work toward addressing the impacts of climate change while building a green economy and ensuring Yukoners can access reliable, affordable and renewable energy. The Yukon strategy for climate change, energy and a green economy highlight the following key actions:

- Reduce the Yukon's greenhouse gas emissions from transportation, heating, electricity generation and other areas by 45 per cent by 2030;
- reduce greenhouse gas emissions from the Yukon's mines per unit of material produced;
- generate 97 per cent of the electricity on the Yukon's main grid from renewable sources by 2030 on average.
- make sure the Yukon is highly resilient to the impacts of climate change by 2030; and build a sustainable green economy.

Transportation by road and air is the largest source of greenhouse gas emissions in Yukon, contributing 61 per cent of total emissions. Close to 90 per cent of transportation emissions come from road transportation, with a relatively equal split between personal vehicles and commercial and industrial vehicles, including those that transport food, fuel and other products. Specific to Transportation, the Strategy includes the following goals and specific set of actions on each goal:

- Increase the number of zero emission vehicles on our roads
- Reduce the lifecycle carbon intensity of transportation fuels
- Increase the use of public and active transportation.
- Reduce the carbon footprint from medium and heavy-duty vehicles
- Be more efficient in how and when we travel
- Ensure roads, runways and other transportation infrastructure are resilient to the impacts of climate change.

The Strategy targets a reduction in single occupant commuting vehicles trips from today's 85 to 55 per cent of all trips by 2031. Specific actions directly related to Public and Active Transportation towards achieving the goals and targets include:

Action	Description
T1	Provide rebates to encourage the purchase of electric bicycles for personal and business commuting beginning in 2020.
T12	Continue to support municipalities and First Nations to make investments in public and active transportation infrastructure

T13	Continue to incorporate active transportation in the design of highways and other Government of Yukon transportation infrastructure near communities
T20	Develop and implement a system by 2021 to coordinate carpooling for Government of Yukon staff travelling by vehicle for work within Yukon.
T24	Continue to operate the Yukon Rideshare program to make carpooling and other shared travel easier
C3	Develop detailed guidelines by 2025 that can be used by the Government of Yukon and partners to develop walkable, bike-friendly and transit-oriented communities.

Yukoners have expressed[9] their desire to have a sustainable and efficient multi-modal transportation system that includes:

Public Transit

- Improved public transportation service (higher frequency, more routes, better schedules) both within and between Whitehorse and other communities.
- User fee incentives (i.e., free service, fare subsidies, tax rebates, etc.)
- Paid parking management strategy in Downtown Whitehorse to reduce private vehicle use.

Regional Public Transportation

- Residents and business owners alike desire to have transportation options (public or private) between Whitehorse and the communities – for passengers, but also for shipping groceries and other items.

Active Transportation

Issues referenced several times as factors discouraging people from walking and biking:

- Current lack of safe biking routes both within and leading into urban centres
- Lack of snow removal on paths and icy surfaces
- Lack of safe highways crossings
- Lack of secured bicycle parking facilities
- Current laws discouraging travel by dog team (sled dogs) / dog—powered travel.
- Paid parking management strategy in Downtown Whitehorse to reduce private vehicle use.
- Concerns about road safety due to hazardous road conditions due to the changing climate
- Lack of adequate safe and protected cycling infrastructure and network, especially in consideration of the significant increase in year-round e-bike usage.

[9] Yukon's Community Travel Project, What We Heard Report (June 2021).

Car-Sharing

- Desire to have car-sharing or trip-sharing services (i.e., car2go, uber, Lyft, etc.)
- Carpooling regional options to/from Whitehorse

Electric/Hybrid Vehicles

- Increasing demand of electric and hybrid vehicles
- Provide financial incentives (subsidies or rebates) for cleaner-energy vehicle purchase for both individual and business.
- Lack of charging infrastructure around the territory it is a barrier to uptake. Suggested infrastructure to be installed in advance of demand.
- Level 3 “fast-charging” stations to enable electric vehicle use between Whitehorse and communities
- Suggested Government of Yukon’s vehicle fleet be converted to electric vehicles.
- Significant uptake and adoption of e-bikes, including e-cargo bikes, with year-round usage.

Community Design/Food Security

- Concerns about communities (and country residential areas) designed for cars not for active or public transit.
- Longer distances to travel and no public transit to country residential areas, commuters are forced to drive.
- Yukon’s reliance on shipped food and goods is a concern.
- Strong desire to support local food production and/or green transportation options to reduce dependency on travel to/from Whitehorse.

6.2 Climate Shot 2030 (Yukon Climate Leadership Council Recommendations, 2022)

Developed by the Yukon Climate Leadership Council, the report provides a series of recommendations to the Yukon government towards their goal of reducing carbon emissions in Yukon by 45 per cent within the decade. Recommendations include using low carbon diesel fuel, applying penalties for heating with fossil fuels, making residential areas denser and retrofitting buildings owned by government corporations.

The reports called strongly for a concerted effort and strong leadership on the part of the territorial government to move the agenda forward. The approach encompasses three overarching areas (‘Enabling Elements’) view foundational elements for any action, plus three specific GHG emission reduction areas:

Figure 6. The Yukon Climate Leadership Recommended Framework (Adapted form Climate Shot 2030)

Particularly related to active and public transportation goals, the report highlights the following goals:

- Creating comfortable, accessible active transportation routes in all communities for Yukon people to meet their local travel needs year-round, including high quality end-of-trip infrastructure such as bike parking and convenient connections to key destinations.
- Recognizing that shifting to electrified transportation will not be enough to meet 2030 emissions reductions goals, creating more opportunity to use clean transportation options for personal, school and work travel.
- Joining other leading provinces in Canada in the requirement for cleaner transportation fuel, including piloting hydrogen fuel in the Yukon; and
- Reducing Yukon people's dependence on car trips to meet daily needs such as travel to work, school and essential services.

Specific recommendations related to shifting vehicle travel towards Public and Active Transportation and GHG reductions include:

Table 6. Yukon Climate Leadership Recommendations towards mode shifting (Adapted form Climate Shot 2030)

Action	Description
L5	Assign responsibility for emission reduction by sector to specific. YG departments (e.g., Highways and Public Works for transportation sector emission reductions). Require YG ministers to issue an annual statement on progress towards meeting their sectors' emission reduction goals;
C2	Identify core skills and knowledge, conduct audit of YG workforce, and reassign relevant staff to support emissions reduction initiatives [such as active and public transportation projects]
C3	In collaboration with First Nation governments and unincorporated communities, develop community-based emissions reductions strategies that are owned by communities;
C4.	Fund additional capacity to enable Yukon regional organizations (e.g., AYC, CYFN) to better support the acceleration of local GHG reduction projects and programs.
C8	Creating a grant or prize for projects that produce substantial emissions reductions

M9	Develop and implement a student travel reduction program to reduce private vehicle travel of Yukon students to and from school by 45% by 2030.
M10	Advocate for the reduction or elimination of minimum parking requirements in municipalities.
M11	Provide stable and increasing operational funding for municipal transit to improve service levels and grow ridership.
M12	Beginning in 2023, structure budgets for the development and maintenance of active transportation and/or transit-specific infrastructure to equal to or exceed 15% of the budget for automobile infrastructure, with the ratio increasing by 5% a year (to 45% by 2030)
M13	Advocate for and provide support to municipalities to develop, approve, implement and report regularly on a Transportation Demand Management Plan that supports the reduction of greenhouse gas emissions.

6.3 Greenhouse Gas Emissions in the Yukon (2022)

To measure our progress on GHG reduction targets, the government produced a bi-annual report to presents annual greenhouse gas emission totals and a look at how they have changed between 2009 and 2020. Accurate and transparent greenhouse gas tracking and reporting is vital. Emissions are reported with a two-year lag (meaning 2020 emissions are being reported in 2022).

In 2020, Yukon's total greenhouse gas emissions for all categories were 737 kilotonnes (kt) of CO_2e. This is a six per cent increase above the 2010 baseline, but a seven percent decrease from 2019 levels. The increase over the past decade appears to be linked to larger trends, such as the Yukon's economic and population growth. The Yukon's emissions overall decreased by eight per cent in 2020 relative to 2019. The decrease between 2019 and 2020 emissions in key categories such as aviation and road transportation appear to be related to the COVID-19 pandemic and Yukoners' transportation choices.

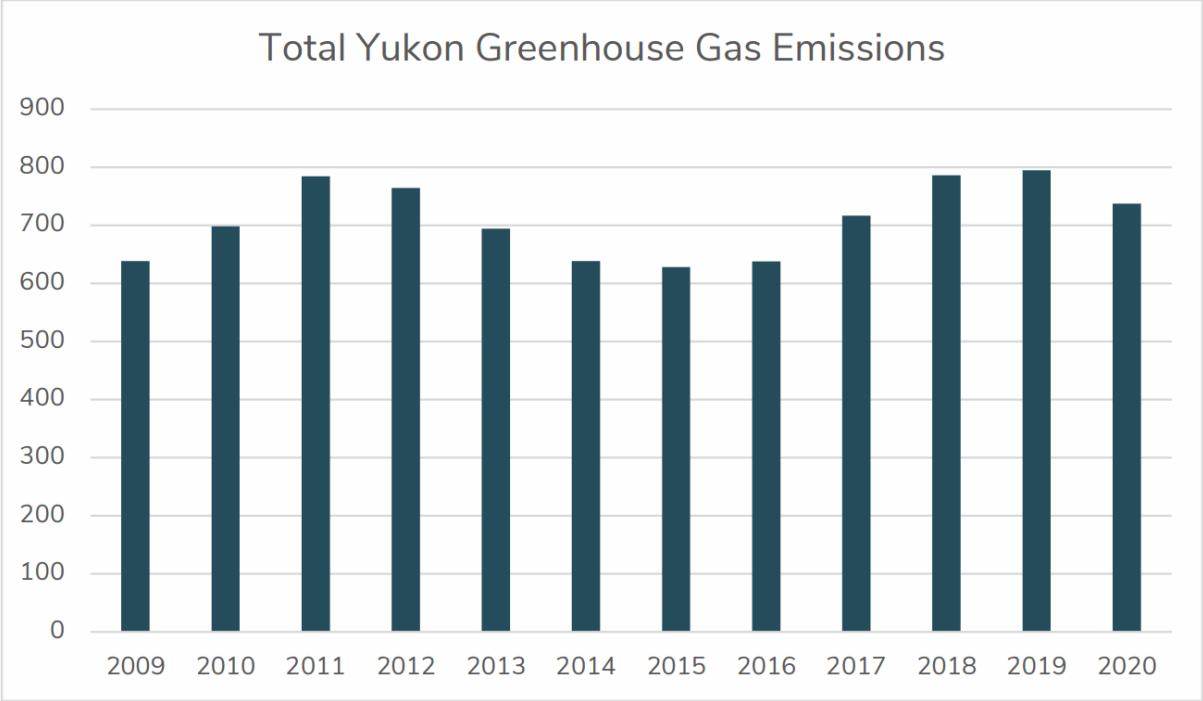

Figure 7. GHG Historic Data Adapted from Greenhouse gas emissions in the Yukon: 2020 (2022)

The dominant sources of emissions in the Yukon have remained relatively consistent between 2010 and 2020 (Figure 7). Road transportation continues to make up roughly half of all emissions, accounting for 54 per cent in 2010 and 50 per cent in 2020.

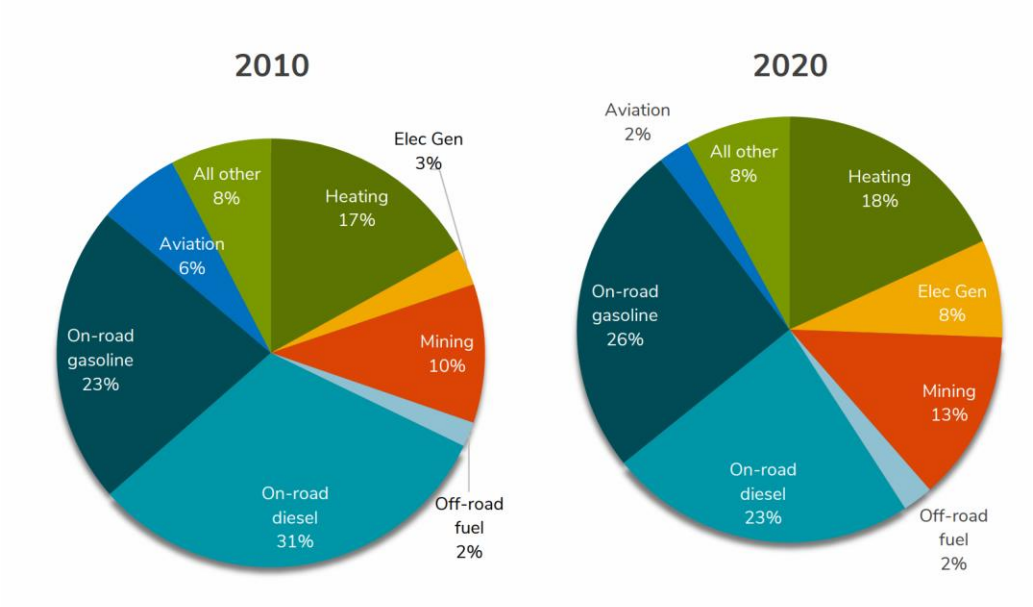

Figure 8. The Yukon's emissions by fuel type in 2010 and 2020. Adapted from GHG emissions in the Yukon:2020 (2022)

It is reported that the Yukoners will begin to see the impacts of Our Clean Future Strategy reflected in the Yukon's 2021 emissions inventory. Updates on the progress that Government of Yukon has made towards the targets established in Our Clean Future can be found in the 2021 Our Clean Future Annual Report.

6.4 Our Clean Future 2021 annual report (August 2022)

This annual progress report shares what the territorial government have achieved up to 2021 calendar year, and where adjustments were made to reach the 2030 goals. Below are reported progress indicators on objectives related to Active and Public Transportation

- Updating Building permits to require new residential buildings are built with electrical infrastructure that supports electric vehicle charging starting in 2022 (action T6).
- Five fast-charging stations are operational for electric vehicles (action T4).
- In 2021, the government issued 274 rebates for electric bikes through the Good Energy rebate program (action T11)
- In 2021, supported five public transportation infrastructure projects (action T12)
- Launched government remote work policy in fall 2021 (action T18)

A reported list of upcoming actions and initiatives for 2022 do not appear to include specific actions or initiatives directly related to active and public transportation improvements.

6.5 The Climate Leaders Playbook: Yukon Supplement

BC Climate Leaders is an initiative of the BC Municipal Climate Leadership Council (BCMCLC) and the Community Energy Association (CEA). The Climate Leaders Playbook was originally developed for BC local government decision-makers wishing to make climate action a priority and mainly intended for BC context. The Yukon Climate Leaders Playbook

supplement was later developed and catered to Yukon audiences and is primarily aimed at elected officials and staff in Yukon municipalities who are interested in acting on climate change. This resource includes visioning concepts for zero-emission communities and identifies practical tools that local-government leaders have available, no matter where they're starting from.

While clearly tracing linkages to the Yukon's Our Clean Future goals, targets and actions, the playbook also highlights the vital importance of municipal (local) governments on bottom-up implementation of initiatives and programs: "Local governments are critical in this journey; they lay the foundation for every resident and business in their community to make the clean choice the easy choice, every time". It further stresses the importance of provincial and territorial leadership, communication, collaboration, and support for local governments to succeed.

The spectrum of local government influence over various sources of transport emissions are shown below:

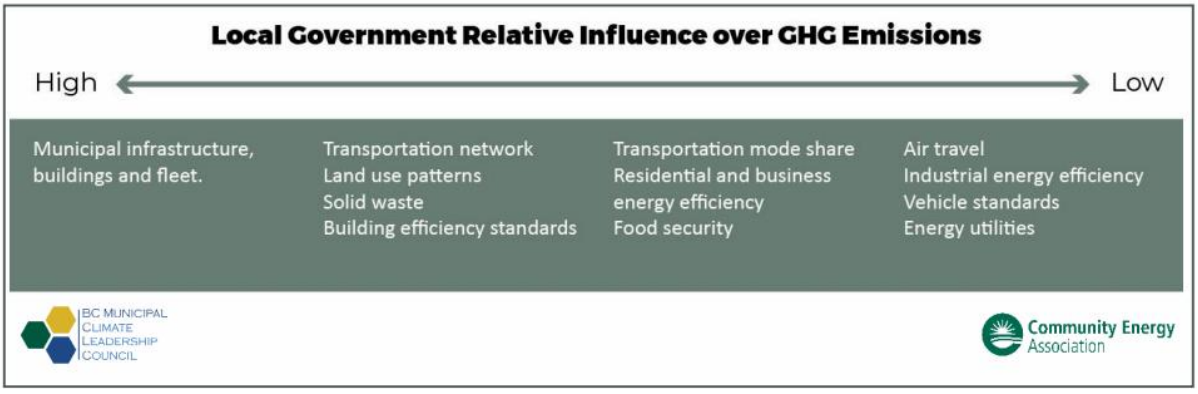

Figure 9. Local governments' varying influence over different sources of emissions. (Adapted from The Yukon's Playbook Supplememt Apr 2021)

Among the three pillars (Big Moves) recommended towards achieving territorial reduction emission targets: a) zero emission transportation, b) zero emission buildings, c) close the loop on waste; the zero emission transportation systems (also referred in the report as Transportation – Shift beyond the car) is of special interest in this report. Highlights of the document's recommended vision, goals and actions are summarized below:

Vision

- More trips taken in our communities are with active/assisted transportation, and more communities have access to transit, including options for inter-community transit.
- a more complete and better-connected transportation system can make active transportation and zero emission transit an easier choice for residents and visitors.

Actions Needed

- Build safe routes for walking, cycling, e-bikes, and other forms of zero emission mobility (e-snowmobiles, e-scooters and e-motorbikes). Advise residents of the availability of Good Energy e-bike rebates

- Support a transit network and participate in efforts to transition to a zero-emission transit network when and where feasible.

- Should transit not be feasible, encouraging carpooling can be an option. In some communities, it may be feasible for the local government to partner (e.g. a First Nation or a major employer) on a shuttle service, which could transition to an electric shuttle when feasible.

Other considerations

- Active transportation has some ability to reduce emissions, particularly in the larger communities, In practice, Whitehorse experience significant year-round active transportation (walking and biking).
- E-bikes are rapidly growing popularity in Yukon by making year-round cycle commuting much more manageable. They enable faster travel across longer distances , steep hills and adverse conditions (snow and wind), make cycling more accessible to a wider range of riders. The Government currently provides rebates for e-bike purchases.
- Emerging technologies for the Yukon currently include e-snowmobiles and e-motorbikes and may hold good potential for the future.
- Transit currently only exists to any considerable extent in Whitehorse, and there is no inter-community transit (although some First Nations provide inter-community travel support, which can extend to passenger buses or shuttles).
- The government currently supports municipalities and First Nations to make investments in public and active transportation infrastructure.
- The government currently incorporates some limited active transportation in the design of highways and other Government of Yukon transportation infrastructure near communities.

6.6 Key Take-Aways (Yukon Climate Change And Policy Context)

- The majority of Yukon's greenhouse gas emissions are from transportation with almost half coming from local and light-duty transportation. Emissions from on-road has been growing, not declining: the relative share of Yukon's emissions has risen from 44% to 49% between 2010 and 2020. Many of these local mobility needs are readily replaceable with active and public transportation.

- The transition to electric vehicles will not happen fast enough to achieve Yukon's emission reduction targets. This creates a need for accelerated the reduction in single occupant vehicle trips and transition to more trips by active and public transportation.

- Strong leadership is needed from Yukon Government to lead the way in the transition to low-carbon mobility. Thus, Yukon Government needs to be the leader in implementing, facilitating and adopting a shift to more active and public transportation in order to meet the Yukon's emission reduction goals.

- Yukon's e-bike rebate program has been highly successful with significant uptake and citizens replacing motor vehicle trips with e-bike trip. However, the infrastructure and regulatory environment is currently not adequate to support this transition. Investment is infrastructure, both network and end of trip, is required to build upon and achieve the full benefits of the e-bike transition.

- These factors create a compelling case for Yukon Government to prioritize its climate action around zero emission transportation, a significant portion of which will be active and public transportation.

7. YUKON MUNICIPAL TRANSPORTATION NEEDS

This section provides an overview of transportation mobility issues and trends as identified in recent relevant documents reviewed and goes further into specific mobility needs by community as identified through a scan reviewed of available online local plans and relevant documents.

7.1 Yukon's Intercommunity Travel Trends

Although not the focus of this study, inter community travel patterns in the Yukon transportation system are relevant to contextualize mobility needs and preferences of Yukoners when traveling outside and within their communities. People need transportation to access the activities that contribute to their physical, economical, social, mental, and spiritual wellbeing. Some of these opportunities for interaction and wellbeing may be available within community boundaries but many of them (usually essential services) are outside forcing people to travel long distances on a regular basis to satisfy their needs. Survey results found that Whitehorse is the primary destination for almost 92% of rural residents that travel outside their community.

The Yukon Community Travel Project (2021) report provides insights to better understand how and why people travel between Yukon communities, what challenges they face, and how access to affordable and safe transportation might be improved.

In essence, the report highlights the flow of rural residents travelling by private automobile on a regular basis to Whitehorse to access essential services such as medical and dental care, as well as affordable and healthy food. Conversely, Whitehorse area residents travel outside the City, less frequently, mostly for tourism, sports, arts, cultural or community events.

Common barriers or challenges that were identified included: the cost of travel; the lack of dependable options for people without vehicles or who had accessibility challenges; concerns about safety (both personal and vehicle safety); difficulties transporting groceries and other purchases; lack of access to phones or internet; and getting around Whitehorse once someone arrived in town.

The noted benefits of improving transportation between communities were many; the most important being to help facilitate equitable access to essential services, and affordable food and goods. The benefits to individual and community well-being, economic development, climate change and cost efficiency were also frequently highlighted.

Many Yukoners also expressed the view that the best solution would be to have essential goods and services available locally in their communities instead of having to travel outside.

The report's recommendations include service delivery options, primarily divided into three category – fixed route, on-demand or ride-hailing services and ridesharing through coordinated (or technology-assisted) volunteer networks. Implementation recommendations include areas for further research (future demands, governance options, capital and operating costs for options), establishing effective communication structures, between and within communities and levels of government, and development of a targeted pilot project to help define needs and establish test solutions.

7.2 Municipality Intra-Community Needs and Trends

The extent that individuals can access the transportation they need directly relates to their demand for transportation: the activities that determine how often and how far they need to travel. It is evident that rural communities in the Yukon have a high dependency on Whitehorse's services, infrastructure, and socio-economic opportunities. That is why most rural residents have no other option but to travel outside their communities.

The Yukon Community Travel Project (2021) review the availability of amenities and services within rural communities based on 13 types of goods and services in four categories: Healthcare, Public Services, Retail Services, and Professional Services. The index ranks communities on a scale of 0 to 1 with City of Whitehorse at the top with the most amenities and service whilst Keno at the bottom of the rank with zero amenities. The Community Amenity Index ranking is shown below.

Community Amenity Index[7]

Whitehorse Area		1.0
Southern	Carcross	0.4
	Tagish	0.1
Central	Faro	0.5
	Ross River	0.5
Eastern	Teslin	0.4
	Watson Lake	0.8
Northern	Carmacks	0.5
	Pelly Crossing	0.4
	Stewart Crossing	0.3
	Dawson City	0.9
	Mayo	0.5
	Keno City	0.0
Western	Haines Junction	0.6
	Destruction Bay	0.2
	Burwash Landing	0.2
	Beaver Creek	0.2

Figure 10. Community Amenity Index (adapted from YTC-Final Report 2021)

It can be said that the potential of travel connectivity (active transportation or otherwise) between residents, services, and amenities within a community is highly correlated with the number and proximity of those amenities and services. The more origin and destinations point within a community the highest the potential for connectivity opportunities between these origins and destinations. Further, it can be argued that one possible path to increased connectivity within communities particularly for active and public transit networks is to build upon existing network and current travel demand within such amenities and services identifying desires paths, missing links, improving existing pathways and infrastructure for safe, efficient, and high-quality connections. The focus here is to try understanding what combination of factors could be improved to foster more intra-community travel, particularly to support active and public transportation mobility within communities and therefore reducing their dependency on private automobiles.

The following sections provide a high-level scan overview of active transportation baseline conditions in a sample of local municipalities in the Yukon. The scan review includes highlights of key activities and generators of travel activity through each community, general geographic context of transportation activity, summary OCP elements related to transportation and review of Strava's pedestrian and cycling data in the community to identify trends and opportunities.

Strava Metro is a suite of data services that enables data analysis of self-reported cycling and pedestrian activity using the GPS tracking capability of a smartphone and similar devices. The Strava Metro data set, which is only available to urban planners and active transportation advocates, includes activity data processed to remove identifiers linked to users and aggregates it as counts to a base map. For this study, we have only used Strava's Global

Heatmap which shows 'heat' made by aggregated, public activities over the last year. The aim here is to identify main AT activity corridors and crossing points within each community so to identify potential risks and opportunities for improvements which could be of further considered in future locally led community transportation studies.

There are two notable limitations to the use of Strava Metro data. First, the userbase is limited to a sample of cyclists and pedestrians that choose to use the app; and second, the app's emphasis on competition tends limit the sample population to active transportation enthusiasts and not so much to everyday commuters. That said, in the context of no available municipal AT data, it was the best possible available source for pedestrian and cycling activity data for this study.

7.2.1 City of Whitehorse

The City of Whitehorse is located in a mountainous valley with the Yukon River running north-south through the City limits. The City has many urban amenities but maintains a rugged northern charm and character. As the capital of the Yukon territory, is a vibrant and growing city with a population of approximately 32,000 people (2020).

The City is responsible for all the roadways within the city boundaries, with the exception of the Alaska Highway and the North Klondike Highway, which are managed by the Yukon Government (YG). This north-south corridor and the North Klondike Highway are the primary access corridors to many areas of the City, and in the case of many country residential neighbourhoods, their only access.

The downtown core and Marwell are the primary employment hubs in the city. Access to the downtown core and Marwell are achieved from four major arterial routes from the north and south of the City, respectively. The major arterials from the north are Two Mile Hill Road, which connects to the Alaska Highway, and Quartz/Copper Road which connects to the Porter Creek and Whistle Bend neighbourhoods. The major arterials from the south are Robert Service Way, which connects to the Alaska Highway and Lewes Boulevard which connects to the Riverdale neighbourhood. Access to the Whitehorse International Airport is via the Alaska Highway, partway between the north and south access intersections with the highway. The airport is located on a plateau above and adjacent to the downtown area.

Hamilton Boulevard arterial roadway is an extension of the Two Mile Hill Road and services the City’s Canada Games Centre recreational facility, and the residential developments located west of, and uphill of, the Alaska Highway. These include the Copper Ridge, Granger, Arkell, Logan, Ingram, and McIntyre subdivisions, all located west of the Alaska Highway. The Hamilton Boulevard Extension connects these areas with a southerly loop to the Alaska Highway.

The City has completed various major transportation studies since 1992, subsequently in 2004 and currently a city-wide multimodal transportation master plan (TMP) is in the works. The latest plan aims to be progressive, multimodal and sustainable, integrating new and emerging trends in the mobility landscape (i.e. sustainable transportation, shared-economy,

electric vehicles, micro-mobility, vision zero, etc.) to better respond to residents needs and reflect the changing transportation environment.

Whitehorse is proudly a Winter City and as such, the City intends to take “Winter Cities” design principles and considerations, along with potential climate change implications, into account in the development of the City-Wide Transportation Study.

Various supplementary studies have been completed, including the City-Wide Transportation Study 2004, 2020 Official Community Plan, 2020 Whitehorse Trail Plan, the 2020 Transit Route Optimization Study, 2014 Transportation Demand Management Plan, 2010 Transit Master Plan, 2015-2050 Whitehorse Sustainability Plan, 2019 Downtown Parking Management Plan, 2018 Downtown Plan, 2018 Marwell Plan, and the 2018 Bicycle Network Plan. These studies have guided the City’s implementation of numerous projects, as well as in identifying issues and planning for solutions.

The ongoing Whitehorse Transportation Master Plan (TMP) is revisiting the City’s long-term vision and strategy for transportation decision-making and investments over the next 20 years. The Transportation Master Plan guides how people and goods move around our city and sets a vision and priorities as a community in shaping a multi-modal transportation network. The TMP sets the direction for a vibrant city where people, goods, and places are conveniently connected by diverse transportation options and works towards developing a safe, equitable, and sustainable transportation network for all ages, abilities, incomes, and seasons. One key goal of the plan is to support more compact and complete neighbourhoods and communities, especially downtown, where residents can access employment, education, groceries, public transit services and other daily services by foot greatly increases the sustainability of a municipality.

In addition, the City has engaged the community, key stakeholders, and interested parties in a variety of ways to share information and receive feedback so to provide ample opportunity to be a part of shaping and developing the TMP. Key themes and takeaways from the community engagement process are highlighted below.

- **Increasing Transportation Options for all Ages, Abilities, Incomes, and Seasons**
  Many comments cited concerns and dissatisfaction with the lack of reasonable transportation options presently available in Whitehorse besides driving. Many comments expressed desire for increasing affordable, safe, equitable, and sustainable transportation options throughout the year. Frequent mentions included encouraging and promoting year-round active transportation options and enhanced transit services.

- **Improve Traffic Safety**
  Comments cited concerns about traffic safety in Whitehorse. Many comments cited concerns with speeding on urban streets and in residential neighbourhoods, lack of enforcement, near-misses, red light running, school zone traffic safety, and pedestrian crossing safety. Many comments expressed desire to conduct more traffic calming and road safety improvements at key locations throughout the City.

- **Focus on Core Transportation Services**
  Comments cited concerns and dissatisfaction with the level of service that the city was providing in maintenance of existing transportation infrastructure and basic

transportation services such as transit and winter maintenance. Comments expressed desire to enhance transportation services such as winter maintenance and transit.

- **Complete Streets**
  Comments expressed concerns that the way the City presently designs transportation infrastructure is perceived to be unsafe and inaccessible for the increasing diversity of transportation users that exist within Whitehorse. Other comments expressed concern that the City's design approach is car-centric. Other comments expressed desire for the City to be bold and creative and reallocate street space for street activities, placemaking, and supporting community and economic activity.

- **Climate Action and Sustainability**
  Comments cited concern about the City's response to sustainability, climate change mitigation and adaptation, and the City's role in enabling residents to make sustainable transportation choices. Others cited concerns that the City was falling behind on following through on greenhouse gas emission reduction targets. Comments expressed desire for increased action on climate change by encouragement and prioritization of sustainable forms of transportation.

To effectively meet residents' mobility needs and concerns, the City is planning for a transportation system that offers a range of transportation choices, reducing reliance on a single mode and promoting active alternatives. An assessment of active transportation requirements is therefore considered a key element of the Plan. The City's active transportation network is continuing to be developed and enhanced to support and encourage walking and cycling activity in Whitehorse through the provision of a safe, well-connected network of on- and off-road facilities. Safety is also a critical pillar of the City's plan for the future. The foundation of a Vision Zero and Safe Systems approach plan to road safety is being laid out in the face of an increasing number of road safety incidents over the past 10 years, most notably pedestrian and vehicle collisions in and around the Downtown.

The new TMP, expected to be completed in the fall of 2023, is the groundwork for meeting current and future mobility needs in the Whitehorse area, outlining a multimodal network to support the anticipated growth, and setting policies, strategies, and priorities for achieving the City's Transportation Vision.

7.2.2 Dawson City

Dawson City is the second largest town in the Yukon after Whitehorse. There are two highways that connect Dawson City. The Klondike Highway, which connects to Whitehorse, approximately 533 km away. The Klondike Highway is open year-round and is paved and maintained. The Top of the World Highway connects to the Taylor Highway in Alaska, which goes through to Fairbanks and beyond.

Road construction in Dawson, like in many Canadian northern regions, presents the challenge of building on soil that remains frozen throughout the year a phenomenon known as permafrost. Conventional black asphalt absorbs the sun's heat resulting in road base meltdown, leading to premature surface deterioration and deformation of the road. Except for Front Street, which was paved with an alternative treatment in 2009, most roads are unpaved to avoid melting permafrost and to maintain the city's historic character.

Sidewalks are wooden-planked boardwalks and are scattered throughout downtown mainly adjacent to institutional buildings and along main roads near Front St. The sidewalk network within the downtown historic district is generally incomplete.

The town's website reports that the average commute within the community (drive/walk) is less than 15 minutes. Main employment sectors include public administration, healthcare and social assistance, accommodation, food services and mining. The latter is still one of the main industries in Dawson City, over 200 family owned and operated placer miners still operate in the Klondike region.

Events such as the Moosehide Gathering and Indigenous People's Day, Dawson City International Short Film Festival Yukon Riverside Arts Festival Dawson City Music Festival (DCMF) draw significant tourism. There is a hospital, K-12 school, college, library, gym, radio station, fire hall, RCMP detachment, swimming pool and rec centre, as well as a wide variety of shops, restaurants, and bars.

The official community plan (OCP) recognizes the importance of transportation networks to and within Dawson are critical to the community's success. Equally important, it notes, is accommodating the various modes of transportation that residents and visitors use, including private or large recreational vehicles, cycling, and walking. The OCP does not mention transit.

In addition to facilitating convenient movement throughout the community, the importance of long-term connectivity between east and west Dawson, and communities surrounding, should be considered. Strategies to increase access to and within the community for all modes include:

- Maintain a walkable community to encourage the use of non-motorized transportation.
- Develop trail linkages between rural neighbourhoods and the downtown.
- Develop a comprehensive and connected trail network by requiring future development to provide connections to surrounding trails.
- Facilitate universal accessibility in the Downtown Core by improving sidewalk connectivity and maintenance.
- Enhance transportation connections between Dawson and Whitehorse to promote tourism and industry connections and support resident needs.
- Plan for the continued connection between east and west Dawson by protecting the area surrounding the existing ferry docking and parking areas.
- Provide motorized multi use trail connections to the rest of Dawson, community-focused housing, and smaller lots.

Pedestrian and Cycling Activity

Dawson is a popular destination for recreational winter activities including mountain biking, hiking, snowshoeing, etc. An extensive network of recreational trails exists in proximity to the historic district making it an ideal setting for supporting multimodal travel arrangement for residents, tourists and visitors wishing to combine recreational, cultural, retail, and other activities within walking convenience. The Historic District's Road network grid pattern is conducive to walking and cycling accessibility throughout the area. Roads are fairly wide, unpaved and unmarked.

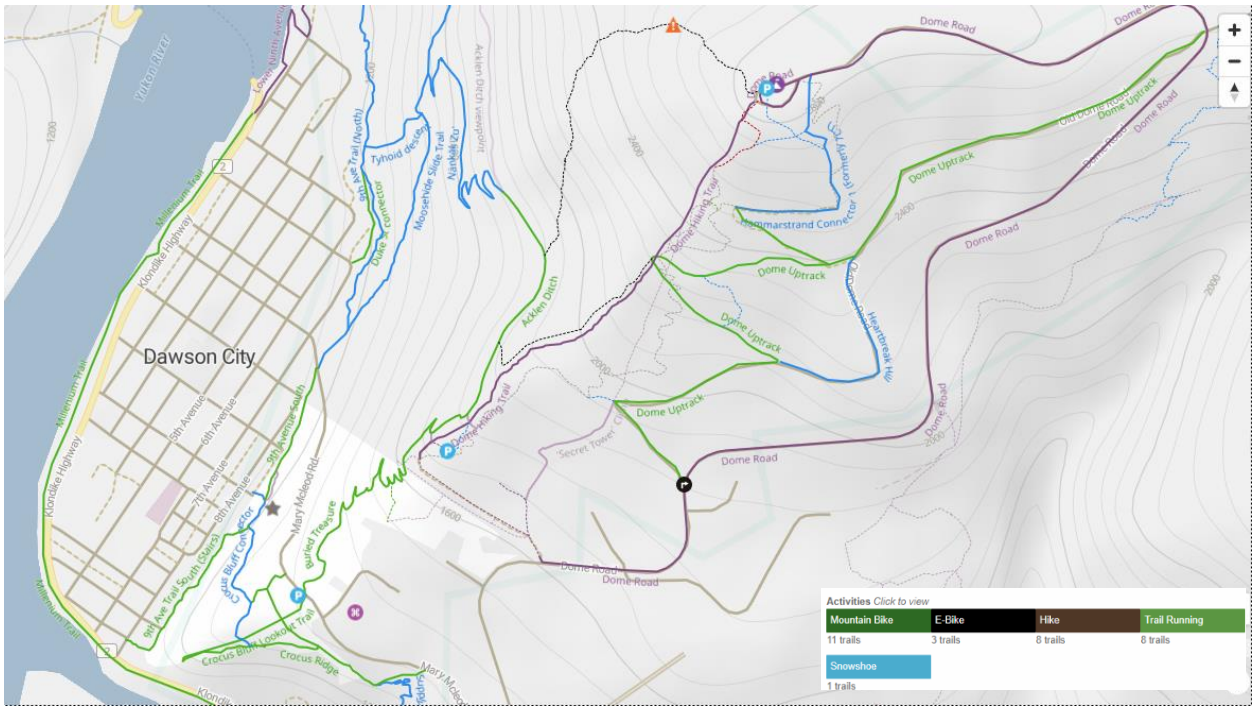

Figure 11. Trails Network Dawson City (Adapted from All Trails.com)

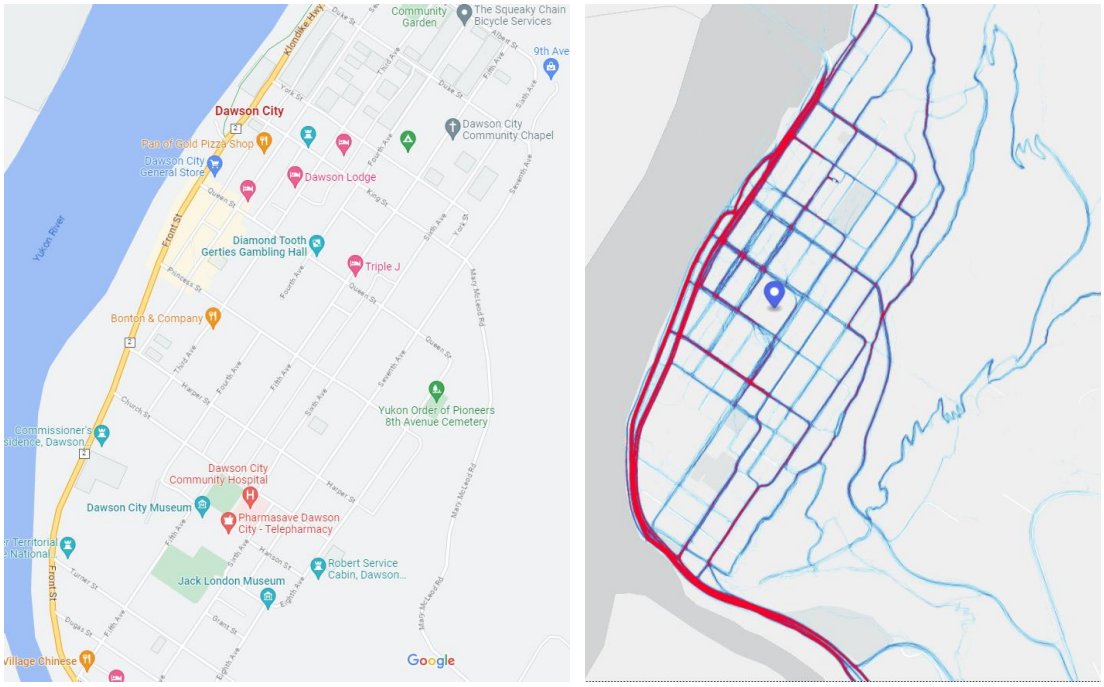

Figure 12. Dawson City pedestrian 'heat' activity map from Strava Metro)

Opportunities

- Most roads in the Historic Downtown are unpaved which deter vehicle speeding and is conducive to share the road with bikes.
- Downtown street grid pattern is very conducive to walking and cycling.
- Downtown area concentrates all amenities and service as well as tourist accommodation and residential areas.
- Winter road maintenance is unknown. Recommend focusing on river front trail as the main usage.
- Mining workers may be shuttle by bus to employment destinations.
- Most recreational cycling and hiking trails start or end in the boundary of downtown.
- E-biking trails available
- Main pedestrian activity along Front Street/ Klondike Hwy, opportunities for providing wider sidewalks and missing links along all Front Street as well as improved pedestrian crossing treatments such as RRFB at key crossing points (I.e. Queen Street, Princess St. Harper St.)
- Provide secure (and covered) bicycle parking across downtown at key locations along Front Street and at key institutional buildings (twon hall, hospital, Yukon Government offices, ferry landing, etc.
- Plan for east-west dedicated bike and pedestrian infrastructure (i.e., multiuse trails) along Klondike Highway connecting future mixed-use, employment and residential areas east and west of downtown.
- Plan the Historic Downtown district to be a Park-Once-and-Walk Districts.
- Expand existing Ski Trails and snow mobile connections

7.2.3 Town of Watson Lake

Watson Lake is located at the intersection of the Alaska Highway and the Robert Campbell Highway. Watson Lake experiences a significant number of vehicular travelers, typically on the way to Alaska for work, business or tourism.

Because of the significant distances between communities in the north, Watson Lake is a natural stopover destination for travelers. The town has many hotel rooms to accommodate travelers, most of them located along the approximately 1.5 km stretch of the Alaska Highway through town. There are 6 larger hotels with room for hundreds of guests. There are also a variety of other lodges, bed & breakfasts, RV park etc.

Peak tourist season of May thru September, with significant increase of ‘rubber tire’ traffic seeing hundreds of thousands of travelers through the peak months. In addition to resident’s pedestrian activity to key schools, hospital and recreational services in the vicinity of the Highway, visitors also become pedestrians once in town walking along and across the Alaska Highway for accommodation, access to commercial services, and tourism attractions near the highway including the well-known Sign Post Forest, the Wye Lake Trail, and the Northern Light Centre, among others.

Strava pedestrian activity data (figure below) show key pedestrian desire lines through town notably around the Wye Lake, near the intersection of the Alaska Highway and the Robert Campbell Highway, along Eight and Ninth Street N, Ravenhill Drive and Nahanni Drive towards a regional trail to the north. Main pedestrian activity generators in Town are near the

intersecting highways, including Elementary and Secondary Schools, Yukon University Campus, Rec Centre (Pool, Arena, Coffee Shop), Bank Branch, shopping mall, Sign Post Forest (tourist/community main stopover), Wye Lake Trail, the Northern Light Centre, Government Offices. According to 2020 data, Watson Lake had a total enrollment of 200 students between Johnson Elementary and Watson Lake Secondary School.

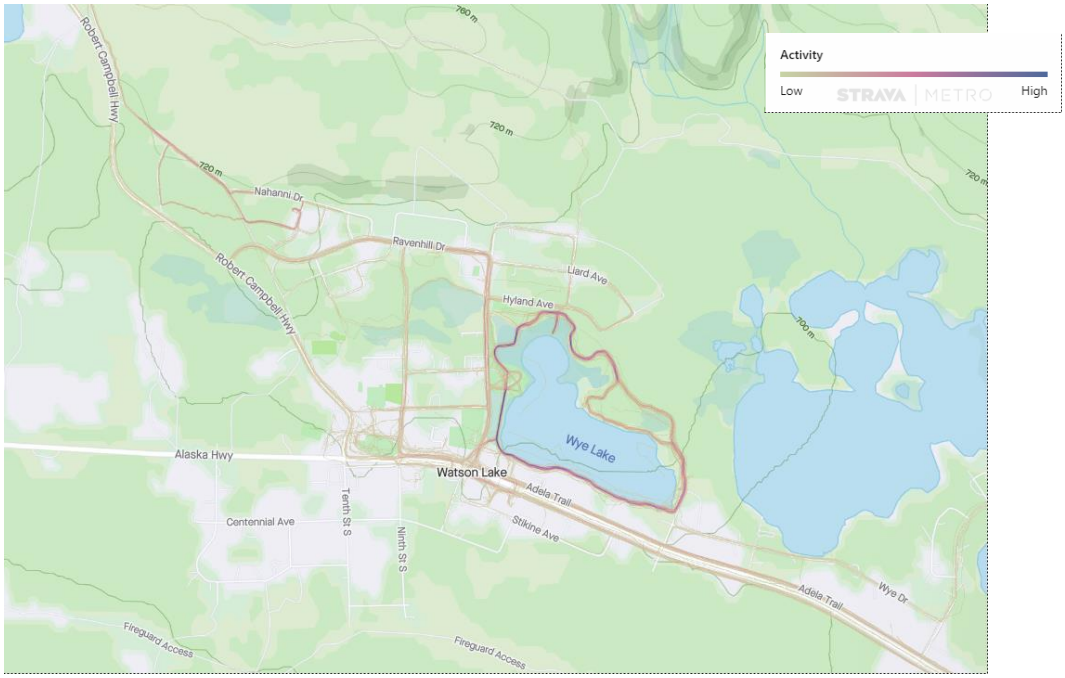

Figure 13. Pedestrian Activity Heatmap (Strava).

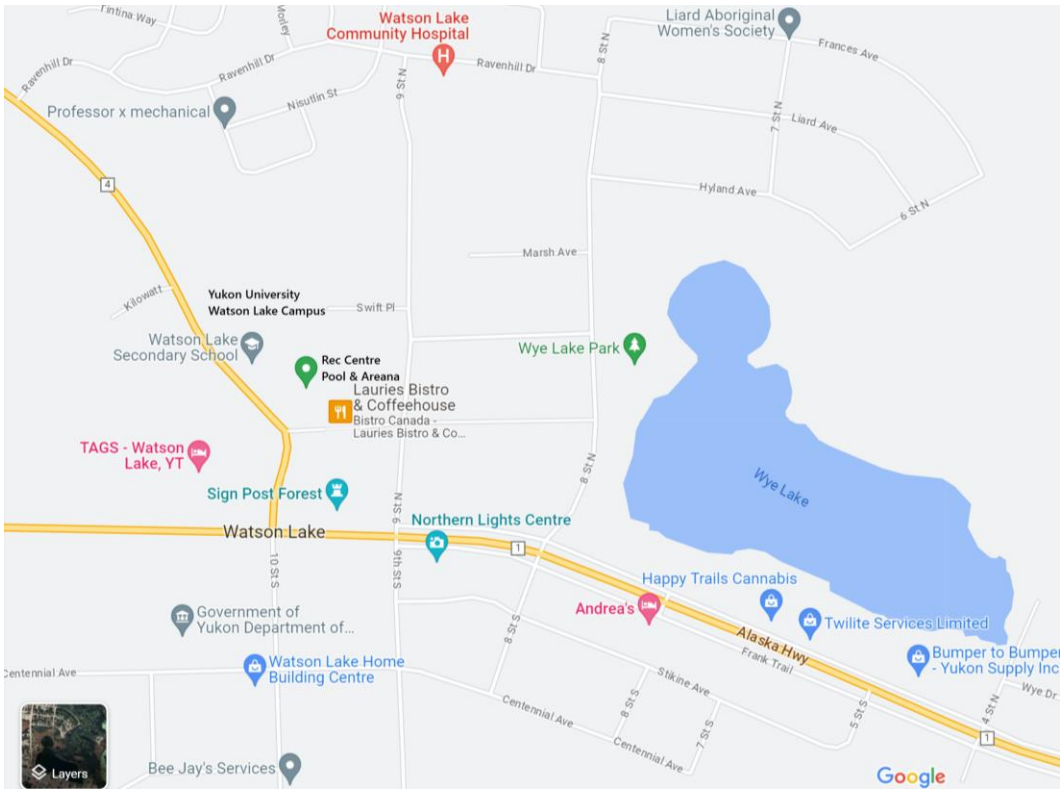

Figure 14. Key Points of Interests and Pedestrian Activity Generators

In the summer of 2021, the Government of Yukon (YG) performed a Community Traffic Safety assessment of the town of Watson Lake to identify areas for improvements with respect to road safety along the Alaska and Robert Campbell Highways through Watson Lake. The Town of Watson Lake and Liard First Nation expressed interests in improving pedestrian safety along and across the two highways. Areas of concerns were identify including the need to improve the quality of pedestrian and cycling environments, supportive AT infrastructure, and safety of cyclist along both highways as well as pedestrian crossing the Alaska Highway including proper connections on both sides of crosswalks.

In 2022, YG's Transportation Engineering Branch secured $1.125 million in federal funding through Infrastructure Canada's Active Transportation Fund (ATF) to add two pedestrian-activated flashing beacon crosswalks of the Alaska Highway (one at Tags Gas and a second at Andrea's Hotel, removing the existing overhead crossing infrastructure at Eighth Street) and install new streetlighting along the Robert Campbell Highway from km 1 to 4. It is understood these projects are in process of implementation.

Furthermore, the YG's Transportation Engineering Branch is in the process of reviewing additional safety measures along both the Alaska and Robert Campbell Highways sections through town particularly as it relates to minimizing the risk for pedestrians and other vulnerable road users in these areas. The improvements envisioned may include retrofits or additions (e.g., trails connections, intersection treatments, missing gaps, gateway treatments, speed management, etc.) or longer-term traffic calming measures or higher order intersection controls. Overall, the focus being on mitigating the potential risk of conflicts between

pedestrian activity across the highway and high-speed motor vehicles and trucks along the highway.

7.2.4 Village of Haines Junction

The Village of Haines Junction is a small community located at the intersection of the Alaska Highway and the Haines Road. The Alaska highway is a key transport corridor for people and goods moving between Alaska and the continental U.S. The Haines Highway likewise provides the only road access for Haines residents travelling to or from the borough. Nearby smaller communities that rely on Haines Junction's good and services include Destruction Bay, Burwash Landing, and Beaver Creek further north on the Alaska Highway.

The North Alaska Highway traverses the traditional territories of the Champagne & Aishihik (CAFN), Kluane (KFN), and White River (WRFN) First Nations. The three First Nations governments and the municipality of Haines Junction are the largest employers in the region. Haines Junction has the only grocery store in the region. The North Alaska Highway is also the only road for residents of the region to travel to and from Whitehorse, or beyond to other Yukon communities.

The community itself has a population shy of 1,000 residents, offering a close-knit and friendly atmosphere. Population is expected to almost double over the next twenty years[10]

The Village of Haines Junction is also home to essential services and amenities, including accommodations, restaurants, gas stations, and a grocery store, to cater to both residents and visitors.

The village hosts one of the largest cycling gatherings and athletic events in the Yukon, the Kluane Chilkat International Bike Relay, connecting Haines Junction, Yukon to Haines Alaska along a 150 miles of scenic ride surrounded by beautiful vistas and wildlife. The event takes place every June and attracts crowds of spectators, athletes, and amateur participants.

A recent study commissioned by the Yukon Government[11] found that a Fixed Route Service option (South-West route) between Whitehorse and Haines Junction would be the most efficient route, serving an estimated 1.3 passengers (transportation disadvantaged individuals) served per kilometre travelled. The route would potentially serve about 169 people in Haines Junction and Mendenhall subdivision, as well as residents of smaller nearby communities (i.e., Champagne, Destruction Bay, Burwash Landing, and Beaver Creek). The study also points out the over-representation of adolescents, seniors, and people with disabilities in the west region who live in the Village and are in need of transportation services.

Strava pedestrian and cycling activity data suggest significant active travel activity for recreational purposes in and around town (see figure below). It appears that Wintergreen Wy road, which connects to and from the Alaska Highway, experiences high pedestrian activity

[10] Yukon Bureau of Statistics preferred "Population Projections 2018".
[11] Yukon's Rural Transportation Challenge: Considerations and preliminary options for improving intercommunity travel https://yfncc.ca/wp-content/uploads/YCT-Options-Paper-Final-June2021.pdf

despite lacking provisions for pedestrian or cyclist accommodation. Similarly, Willow Acres Rd., another key and paved connection to the Alaska Highway, seems to have high pedestrian activity and yet features off-road gravel pathways on either side to accommodate pedestrians and cyclists. Other high activity AT links appear to follow major collector roads in residential areas, as well as along the Alaska Highway.

In rural communities like Haines Junction, where services and amenities are typically located within or near the main highways, it becomes crucial to provide segregated pathways and safe crossing locations for vulnerable road users. This may involve implementing dedicated pedestrian and cycling pathways alongside major collector roads and highways, as well as establishing safe highway crossing locations with appropriate treatments to enhance the safety and accessibility of active transportation.

In addition to segregated pathways and safe crossing locations, other road safety improvements, such as more rigorous intersection controls, intersection tightening, lane narrowing, and lower speed limits, improved pavement markings and signage can contribute to creating a safer environment for pedestrians and cyclists. Enforcement efforts and education campaigns can also play a role in promoting awareness and responsible behavior among all road users.

Recently a 7 km long paved multi use trail was built along the community connecting it with Pine Lake campground and recreational area. Unfortunately, the path does not meet all-ages and ability (AAA) guidelines due to unnecessarily steep grades among other issues.

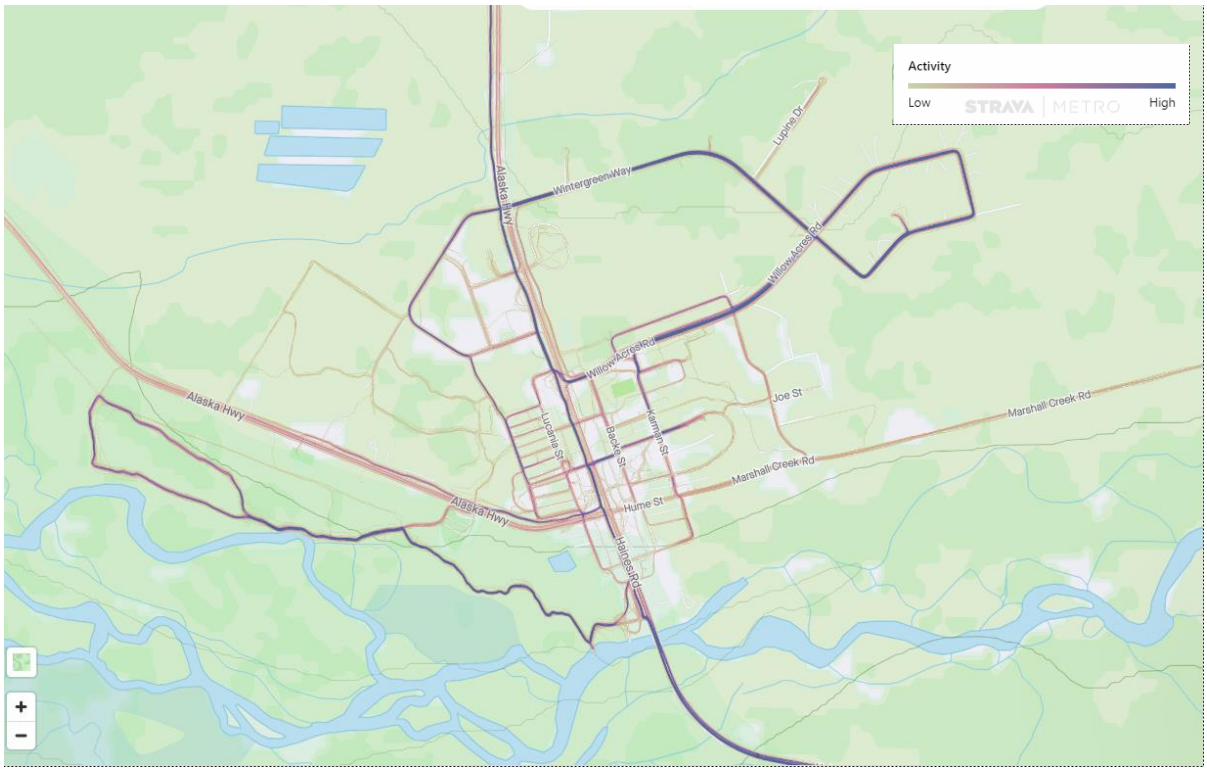

Figure 15. Village of Haines Junction pedestrian and cycling 'heat' activity map (Strava Metro)

From an operation and maintenance perspective, the Public Works department maintains several kilometres of roads and streets, numerous trails, parks and playgrounds among other core services. The department maintains all municipal buildings including four pumphouses, one lift station, a Firehall, the Public Works shop, the Shakwak Valley Community Pool and Community Hall, the Bill Brewster Arena and Mezzanine, and the St. Elias Convention Centre.

It's important for the Public Works department to collaborate with other relevant departments, community organizations, and stakeholders to ensure that the trail network meets the needs of residents and visitors. This collaboration may involve working with recreational or trail user groups, local government agencies, and community members to gather feedback, identify priorities, and address any specific requirements or concerns.

7.2.5 Village of Carmacks

The Village of Carmacks is a small community situated at the confluence of the Yukon and Nordenskiold rivers, approximately 177 kilometers north of Whitehorse.

Carmacks has a population of around 500 people, many belonging to the Little Salmon/Carmacks First Nation.

The village serves as a transportation hub along the Klondike Highway, which connects Whitehorse to Dawson City. It is also the western terminus of the Robert Cambell Hihgway, which connects to the communities of Faro and Ross River. The community acts as a rest stop for travelers and tourists exploring the region. Carmacks offers basic amenities such as a gas station, convenience store, post office, and a few accommodations for visitors.

Most business and services are located in proximity to the Klondike Highway right-of-way and also within walking distance to the Yukon River waterfront. Not surprisingly, as shown in the figure below, the majority of pedestrian and cycling activity gravitates along the Klondike Highway near the Carmacks Interpretative Center and across the Yukon River bridge, connecting to the river-side wooden boardwalk along the north edge of town. Some pedestrians and cyclists still appear to use the highway despite the lack dedicated trails on either side of the road.

It appears the municipality has made efforts to enhance the pedestrian walkway along the south side of the river (adjacent to River Drive) for both recreational and utilitarian purposes. This pedestrian route could be further consolidated as a key all-ages-and-abilities (AAA) AT east-west link across town linking residential areas on both sides of the river while improving north-south connections to ‘downtown’ commercial businesses and services. By doing so, the majority of pedestrian and cycling activity remains segregated and away from high-volume and high-speed motorist traffic along the highway.

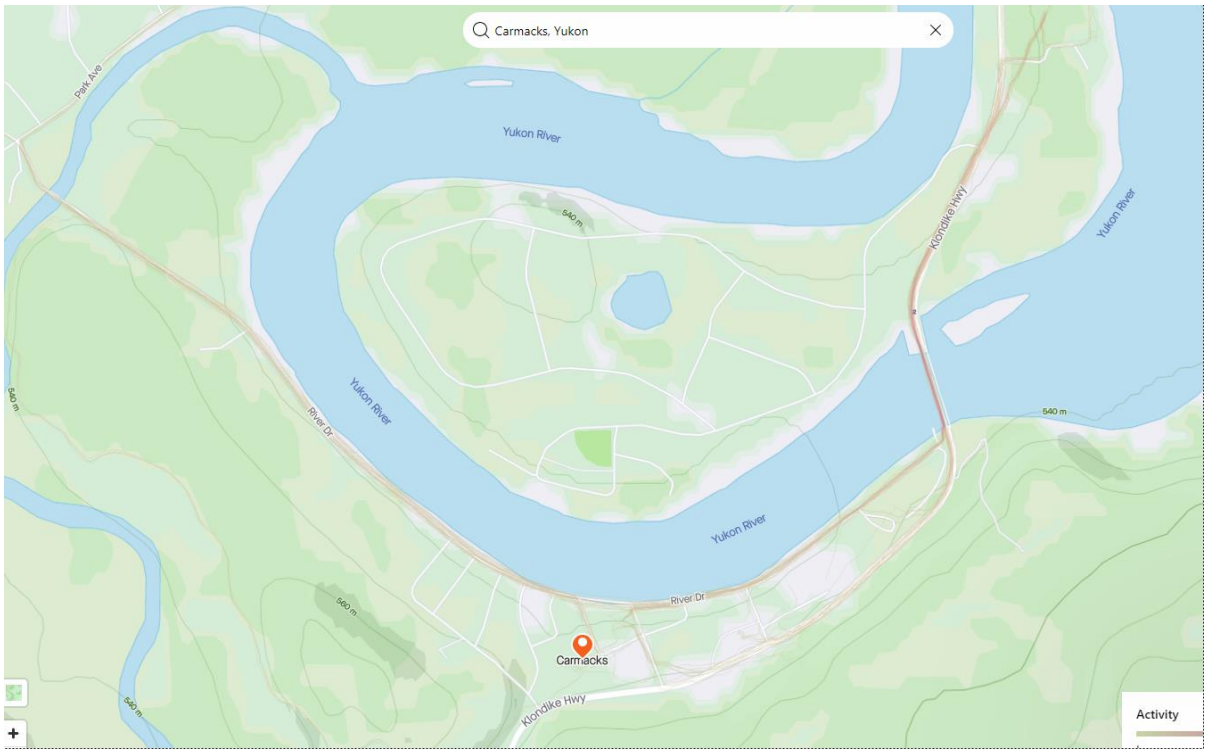

Figure 16. Village of Carmacks pedestrain and cyclist 'heat' activity map (Strava Metro)

7.2.6 Town of Faro

The Town of Faro is a small community (around 400 residents) located approximately 277 kilometers north of Whitehorse. The Town has grown significantly over the last several years (almost 25% growth between 2016 and 2020 according to census data).

The town offers basic amenities and services to both residents and visitors namely a grocery store, gas station, post office, community center, and a few other services including a golf course and a Yukon University campus branch.

The Town has recently completed a draft official community plan (OCP) with some key draft policy directions. In April, residents and staff were asked to help guide Council on the direction on various aspects of Faro's growth and vision for the future. Among other policies, the ideas of a establishing a 'Main Street' core, including the removal of the Solar Complex and re-routing the road to support a small-town and friendly Main Street feel with new commercial opportunities were discussed.

To the above, residents support the idea of a more deliberate approach about the heart of Faro. To be more of a destination instead of a 'stop-over' town, and to create a feeling of gathering and mingling (more than just a place to park). Also, the importance of safety, especially for kids, and ensuring that any planning process is transparent and involves citizens.

Figure 17. Town of Faro pedestrian and cyclists 'heat' activity map (Strava Metro)

Based on current Strava's pedestrian and cycling activity data (figure above) the main route for active transportation follows the road alignment along Campbell Street and Lorna Boulevard around the Yukon University Campus and the golf course as well as in proximity to most services along Campbell Street to the north. Safe accommodation of vulnerable road users along this route and across key crossing locations would be a key priority in the future in support of more active transportation options and a more cohesive and integrated 'main street' place making effort.

7.2.7 Village of Teslin

The Village of Teslin is a community located in the southern part of the Yukon. It is situated on the shores of Teslin Lake, approximately 180 kilometers southeast of Whitehorse.

Based on Strava pedestrian and cycling data, key Active Transportation routes throughout the community are shown in the figure below.

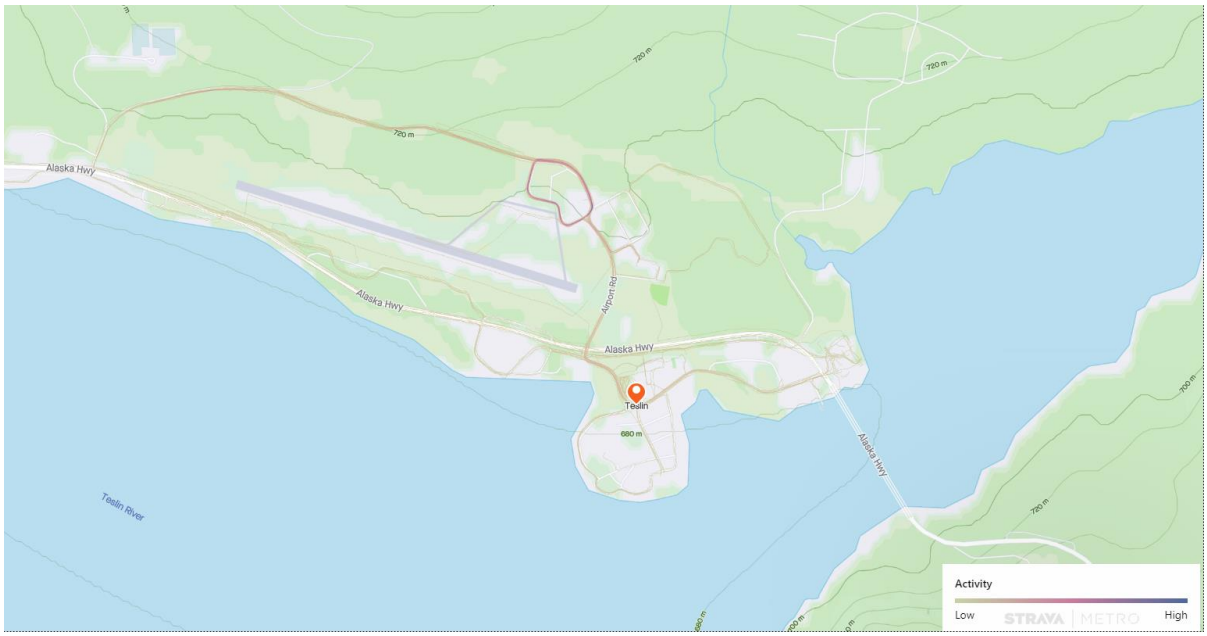

Figure 18. Village of Teslin pedestrian and cyclist 'heat' actvity map (Strava Metro)

Teslin has several transportation assets including the Alaska Highway, the airport, and the marina. While both the airport and the Alaska Highway are the responsibility of the Yukon Government, these have significantly shaped the community form and function. The Alaska Highway has the potential to significantly bisect the community, without due attention to compact community development. Local roads are the responsibility of the Village.

The most recent Teslin OCP[12] document highlights some key areas of concern and improvement in the transportation system:

- A hierarchy of roads under the Village jurisdictions needs to be clarified.
- Safe pedestrian links throughout the community need to be established and improved.
- Establish a reliable and frequent transit service to and from Whitehorse.
- Safety of quads and snow machines that are currently using the roads. Users include significant number of youth and adults without a car.

Furthermore, several actions related to transportation improvements were listed and which extent of completion is unknown. Nevertheless, these are noted below for information and follow-up:

- Develop a priority list for road upgrades within the Village and pursue funding to implement the road improvements.
- Pursue intersection improvements at both ends of Nisutlin Drive, with priority to addressing the parking and safety issues at the Nisutlin Drive/Airport Road/Alaska Highway intersection.

[12] Village of Teslin Official Community Plan
https://static1.squarespace.com/static/5a1355c8d74cff26eb78da29/t/5c103da00ebbe88a73f4000b/1544568297270/Teslin+OCP-Final.pdf

- Pursue lighting along the Alaska Highway to improve pedestrian safety.
- Work together with the Yukon Highways Department to identify and implement effective ways to ensure that drivers along the Alaska Highway slow down to posted speed limits through the Village of Teslin.
- Pursue pedestrian crossing signage along the Alaska Highway to improve pedestrian safety.
- Pursue the development of a pedestrian walking lane across the Nisutlin Bridge.
- Investigate the feasibility for creating lighted pedestrian tunnels under the Alaska Highway.
- Investigate the feasibility of developing an alternate off-road transportation system for quads and snow machines.
- Investigate the feasibility of improving the marina through creation of a longer boat ramp.

In 2021 the Village and Teslin Tlingit Council collaboratively developed an Integrated Resource Plan[13] to help build energy independence. One recommendation of the plan was to develop a Sustainable Transportation Strategy for Teslin with the goal of reducing dependance on imported transportation fuels.

7.2.8 Village of Mayo

The Village of Mayo is a small community (about 500 people) located in the central part of the Yukon Territory. Situated on the Silver Trail Highway, approximately 406 kilometers (north of Whitehorse.

Mayo is located on the Silver Trail Highway, which can be traversed by cyclists. Walking is a viable option for getting around the village center and visiting nearby amenities and attractions.

Based on Strava pedestrian and cycling data, key Active Transportation routes throughout the community are shown in the figure below.

[13] Morrison Hershfield. 2021. “Teslin Integrated Resource Plan.” 2021.

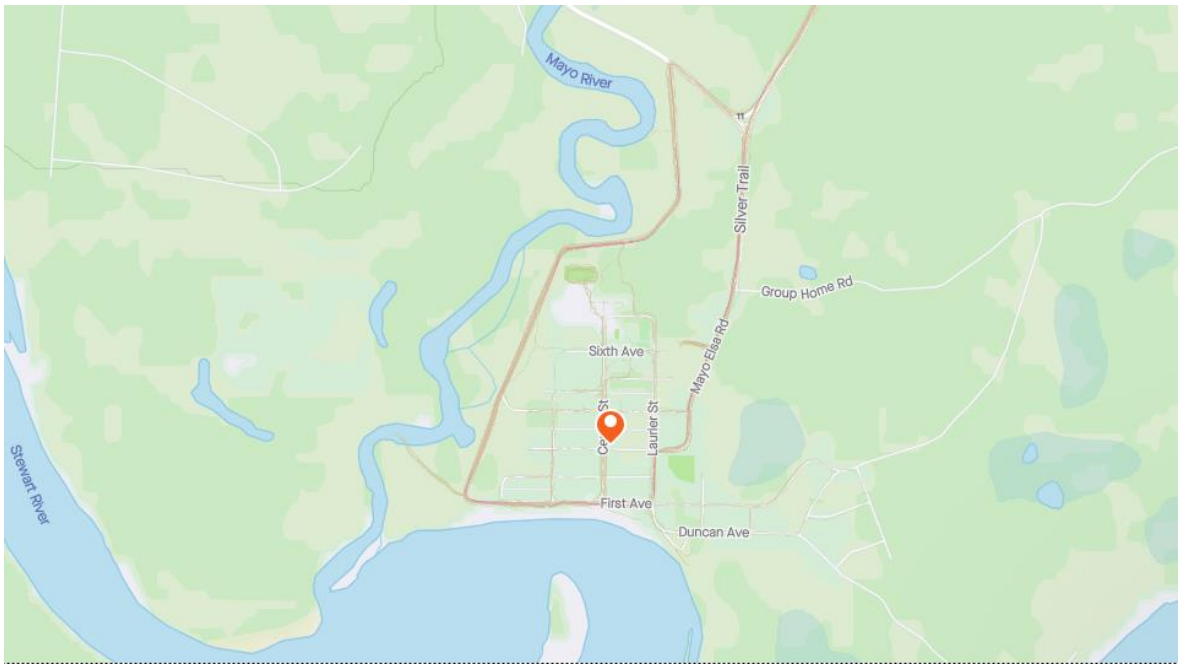

Figure 19. Village of Mayo pedestrian and cyclist 'heat' activity map (Strava Metro)

In the regional context, the Silver Trail roadway corridor is the main road connection of communities along the way to the Klondike Highway corridor, which is a key regional transportation in the northern region between Dawson City and Whitehorse. The Silver Trail roadway corridor connects the communities of Stewart Crossing, Village of Mayo and the community of Keno. Roughly 550 people live among these three communities with almost all of whom (about 500) live in Mayo. These communities lie in the traditional territory of the Na-Cho Nyak Dun.

The Yukon Community Travel Project report[14] highlights the importance of the Silver Trail highway corridor as a regional connection and identifies opportunities and building blocks to foster a more equitable and sustainable transportation system including regional collaboration and partnership among the many private transportation services, First Nations and municipal governments, NGOs and other civil organizations with interest in transportation issues (e.g. Klondike Visitor's Association, Silver Trail Chamber of Commerce). Other building blocks identified included subsidized travel for disadvantaged groups, and provisions to make community vehicles available for residents of Mayo and Keno to connect residents to the North Klondike Highway at Stewart Crossing where more frequent and reliable travel options may be available.

The latest OCP[15] does not mention any specific goals in terms of transportation infrastructure nor any provisions to sustainable transportation options but rather focus on basic

[14] https://yfncc.ca/wp-content/uploads/YCT-Final-Report-Final-June2021.pdf
[15] Village of Mayo Official Community Plan 2016 https://villageofmayo.ca/wp-content/uploads/2013/12/Official-Community-Plan-2016-1.pdf

infrastructure services such as water and sewer upgrades and new recreational facility constructions and upgrades.

7.3 Key Take-Aways (Municipal Needs)

- The City of Whitehorse is the only municipality in the Yukon working on a comprehensive suite of strategies, plans and programs specifically intended to modernize and progress on the latest best practices in equitable and sustainable transportation systems. Additional interjurisdictional collaboration with the Yukon Government is still needed.

- For most rural communities, many needs (i.e., medical and dental care, affordable and healthy food) are outside their municipal boundaries forcing people to travel long distances on a regular basis to satisfy their needs. Whitehorse is the primary destination for almost 92% of rural residents that travel outside their community.

- Many Yukoners have said that the best solution would be to have essential goods and services available locally in their communities instead of having to travel outside.

- There is a lack of Active Transportation (AT) emphasis and explicit language in available planning documents and bylaws at the local level. Many local governments lack the resources or expertise to make the specific regulatory changes that will create more sustainable communities. If (when) AT is mentioned is barely related to access to nature and recreational activities, hence no mentioned at all about utilitarian trips for daily life (i.e. school trips, shopping, employment, etc)

- A common theme across local communities is that highest pedestrian activity tends to concentrate in proximity to main highway corridors through towns and villages as is there where main services for residents and visitors are typically located. In some cases, ‘main street’ concepts have been implemented which recognizes the need for special AT planning.

- Identification of AT priority projects or connections is rare to be found in local planning documents or bylaws.

- No available data on AT mobility, travel patterns, collisions, travel preferences or needs is available except for Whitehorse. Even at territorial level the data on AT is scarce.

8. SUMMARY OF FINDINGS & RECOMMENDATIONS

8.1 Key Findings in Municipal & Territorial Transportation

8.1.1 Public Transit

- Finding #1. The need is high; demand is low.

  Lack of local services, particularly medical and professional services, but also access to food, social and recreational services is common in rural and remote areas. Often, this lack of resources is addressed though transportation – travelling to access the necessary services. While this is often not ideal, it is often necessary in the short- and medium-term because the population levels cannot support the necessary service.

  This creates a reliance on private transportation since public transportation services encounter the same challenge – too low populations or density to make a public service financially sustainable.

  The inability to afford private transportation does not reduce the need for travel – it simply makes the need for an alternative even greater. Low levels of aggregate demand also do not reduce the need for transportation service – it simply makes it more difficult, and expensive, to provide.

  It is important not to equate low levels of demand with need. Transportation to vital services provides essential life supports, and when private transportation is not available or appropriate, for any reason, public transportation services are critical. Without transportation access to services, the only remaining solution is to relocate closer to remove the access barrier – disrupting personal lives and community viability.

  Transportation options need to be optimized, balancing attractiveness of convenient frequent service against its cost. Low demand levels make frequent service cost-prohibitive, lower frequency services limits the effectiveness and viability of the option.

- Finding #2. There is a lack of operations funding support from upper tier governments.

  Like many services with infrastructure components, capital funding support from federal and provincial /territorial governments is common, while operating supports are not. Funding for operations is typically left to the local governments to provide, which requires allocation of local property taxes, or community funding while limited targeted grants offer ad hoc supports that do not support long-term financial planning. For First Nations communities, providing local funds for transportation operating costs can be complicated by restrictions on funding programs and accounting responsibilities.

In the short-term, there is little opportunity to change this limitation. As details for the Permanent Transit Fund (PTF) emerge from the federal government prior to 2026, there may be an opportunity to incorporate some degree of operating funding The Canadian Urban Transit Association as well as the FCM are currently advocating for a wider range of funding eligibility.

Operating funds can also be derived from local sources including service agencies, charitable foundations and others. While these funds can be used to contribute to local matching funds for upper tier funding, the challenge is to establish predictable funding from these sources.

- Finding #3 - Accessibility is an essential component of any service.

  People with disabilities are often over-represented in vulnerable populations without access to private transportation, either because of their functional inability to drive, or their inability to afford to own and operate a vehicle.

  As a result, physical accessibility of the vehicles is importance to the transportation system. This means supporting a variety of vehicle options in the fleet to meet the range of needs of customers in the most cost-effective way possible.

  Accessibility can also be defined in financial terms. Several private shuttle services exist throughout Yukon but are unaffordable for local trips. People relying on public transportation often do not have significant financial resources, and ensuring affordable options is an important element of access.

- Finding #4 - Lack of local service

  Local transportation opportunities are critical to an effective transportation system. Whether the trip is exclusively local, or includes a long-distance corridor trip, the local service component provides that access to residences, and required services. With corridor services, the ‘first-mile’ and ‘last-mile’ connections are necessary to provide direct access between residence and service.

  As part of this equation, pedestrian and active transportation networks are critical since they can serve the very short distance connections – either in place of a local service or connecting to it for longer trips.

  Local service networks traditionally rely on fixed route service, which requires a minimum level of density and demand to be effective. These conditions, practically, only exist in Whitehorse. Alternative service models, including on-demand services and volunteer networks can be tailored to smaller and lower demand areas.

  Where local services, regardless of the delivery model, are used to connect corridor services, the challenge is to provide a convenient, reliable connection between the services.

- Finding #5 - Lack of governance structures to facilitate coordinated planning and communication.

  Individual communities cannot, and should not, necessarily provide service to meet the wide range of needs for longer distance trips. Particularly for inter-community corridor trips, it is important to link services together with local access connections and segmented trips that facilitate effective return-trip opportunities.

  This requires coordinated planning and operational delivery and is best managed by a centralized planning function, whether that function is housed as a part of one of the local communities taking responsibility, or a separate entity.

  Extending this centralization to the operational level can also be effective in regional applications but must be carefully considered to find the correct balance for efficient operations.

  At the local level, planning for public transit services is rarely included in mainstream planning initiatives. Like active transportation, public transit, whether formal or informal, is typically not part of transportation plans, community plans, or even plans of subdivision. Typically, planning addresses the needs of private auto travel and goods movement since those needs represent the vast majority of the functions of the transportation network.

  This leaves public transit and active transportation without a clear mechanism to establish priorities and projects that cand be part of an integrated approach to transportation planning. Often this can also work to preclude or limit public transit options if the road network, community plans and infrastructure programs are not designed to accommodate transit options.

- Finding #6 – a wide variety of innovative services are available, and needed, to provide service, especially at the local level. The type of service to be provided will vary by demand levels within and between communities. The Yukon Community Travel Project report identified three principal models for consideration: Fixed route, on-demand services, and ridesharing networks.

  Fixed route services can be applicable in Whitehorse and for inter-community corridor services. In other areas, including lower demand areas in Whitehorse, flexible on-demand services are more appropriate.

  These flexible options can be enabled through technology, such as ridesharing apps or booking platforms, and new approaches require comprehensive communication programs to build community awareness.

  Communities also need to be flexible to determine the most appropriate model that may vary by time of day, day-of week, or geographic area. Local shuttle services, primally developed by and for First Nations communities are good examples of models that can be replicated in other areas. Fixed route services are appropriate for corridor services and larger communities (such as Whitehorse), and volunteer coordination programs can be used to fill a variety of gaps in very low demand areas or times.

A comprehensive approach to service design and delivery, with coordinated solutions across communities, is required.

8.1.2 Active Transportation

- Finding #1 – Lack of Active Transportation (AT) emphasis in available planning documents and bylaws at the local level

  Many local governments, however, lack the resources or expertise to make the specific regulatory changes that will create more sustainable communities. It is generally found that most local municipalities and FN governments, except for the City of Whitehorse, do not have planning documents or bylaws that specifically address active transportation issues, generally or specifically, as part of more integrated transportation system. Understandably, active transportation may not be seen as an immediate priority for many communities where more pressing services and infrastructure needs exists (i.e., water supply, waste management, health services, education, housing, telecommunication, etc.).

  Accordingly, local municipal structures and administrations are geared towards the planning and implementation of basic priorities in terms housing needs, schools, food security and agriculture, land use and development, parks, road connectivity with regional and territorial networks, water infrastructure and economic infrastructure that promotes and support supply-chain for goods and services, local employment opportunities, businesses and to some extent recreation and tourism infrastructure and services. Most of these issues are typically addressed within Official Community Plans (OCPs), municipal by-laws and policies.

  In most municipalities, the emphasis is to develop or enhance connections from neighborhoods to the natural environment, which in all cases is significant including nearby pristine wilderness, rivers, and mountains, therefore putting special emphasis on recreational trail, boardwalks connections along water bodies, and bridge connections across rivers. In contrast, there is not a significant emphasis on developing or enhancing more 'utilitarian' travel opportunities for day-to-day trips within the community such as walking or cycling routes to school, dedicated pedestrian connections to local services and facilities (i.e., public library, medical facilities, local business, etc.). In some village and towns, sidewalks are limited to the 'downtown' core, usually wooden-planked boardwalks with limited universal accessibility features (i.e., wheelchair ramps), and with significant gaps in the network. Pedestrian infrastructure winter maintenance (or lack thereof) it is also limited.

- Finding #2 - Pedestrian activity is significant in proximity to main highway corridors within municipal local boundaries.

  In many cases (i.e., Watson Lake, Haines Junction, Carmacks, Teslin, Mayo, etc.) the presence of pedestrian activity (excluding recreational purposes), tends to gravitate in and around the main highway through town. This is not surprising, considering a historic pattern of development of rural towns centers in North America, where main

services and opportunities are generally planned and developed along either side of highway routes for ease of motor vehicle access. In fact, provincial and territorial highway authorities often designate land uses adjacent to the highway right-of-way as of commercial-highway allowable land for such purposes.

In many local municipalities, key services, tourist and recreational attractions, hotels, banks, gas stations and other services are located on either side of a highway corridor. Likely, most patrons (residents and visitors) arrive by motor vehicle using the main highway through town to access their main destination. Once parked, they may choose to complete other errands by walking to nearby business and services. Other patrons may simply do not have a vehicle, not be able to drive or may not be legally allowed to do so (i.e., children, youth or people with health limitations) therefore having no other option but to use alternative modes.

In some cases, such as Watson Lake and Haines Junction, a frontage road has been constructed parallel to the highway. Frontage roads are local roads running parallel to a higher-speed, limited-access highway. Their core intent is to provide access to local roads, shops, houses, services, etc. while minimizing access disruptions to free flow through traffic along the main highway. In practice though, like in the cases of Watson Lake and Haines Junction, evidence indicates that significant number of pedestrians still venture across the main highway (and across frontage roads), in many cases at uncontrolled locations, with potentially high risk of collisions with high-speed vehicular traffic.

Finding #3 – Identification and formulation of Active Transportation projects at a local level

Multiples challenges are faced by municipal and First Nations governments in the Yukon when it comes to identifying and proposing projects, particularly in the context of active transportation funding. Several limitations and constrains in the capacity of local government make it difficult for these governments to move from project ideas to formal proposals, despite awareness of the community's needs. Some of the key challenges identified include the following:

- Understaffing or under-resourced local administration with limited personnel taking care of multiple municipal functions.
- Administration tends to focus on day-to-day operations and maintenance issues and not enough resources or personnel for long-term strategic planning.
- Lack of training and information on available programs for municipalities and resources to enhance local ability to identify, scope and budget projects.

Finding #4 – Funding Gap

There is still an important funding gap to building and maintaining cycling infrastructure in the territory. Availability of exclusive and predictable active transportation funding

has been identified as central to making active transportation a priority in other provinces[16]. This can also be a funding prioritization issue at the Territorial level.

The need for more dedicated funds specifically for AT project such as in BC and ON will significantly help building pedestrian and cycling facilities without having to compete with other road projects.

The need for funding goes beyond construction to include winter maintenance costs, which is proven to be a critical deterrent for winter cycling.

Amidst competition with other perceived priorities, the governments of Canada and the Yukon Government support active transportation through a few direct and indirect capital funding programs. In the current system, the three most utilized include:

- Federal Active Transportation Fund (ATF), to which Municipal and First Nations governments can apply directly.
- Federal Canada Community-Building Fund (CCBF) in the Yukon (not AT exclusive but applicable). Currently, the CCBF is distributed: 68% to municipalities, 25% to First Nations governments, 7% to unincorporated communities.
- Territorial Community Development Fund (CDF) - also not dedicated to AT- to which Municipal and First Nations governments can apply directly.

Although not designed for AT, the Federal Investing in Canada Infrastructure Program (ICIP) provides funding for Public Transit, and other streams including, Green Infrastructure, Community, Culture and Recreation Infrastructure, Rural and Northern Communities Infrastructure.

Yukon government (Department of Community Services) administers the federal ICIP and CCBF funding for public and active transportation projects, respectively. For ICIP and CCBF, municipal and FN governments put forward projects to Yukon government. Yukon government is responsible for initial decision on whether proposed project meets federal funding criteria. For ICIP, YG passes proposal onto the Federal Governments for approval before project can start. For CCBF funding, applications do not need to approve by the Federal Government before project starts but YG is responsible for annual reporting to the Federal Government. The bilateral agreements between YG and the Federal Government for both these funds are available online for public viewing.

<u>Finding # 5 – Lack of Multimodal Data</u>

[16] https://opha.on.ca/wp-content/uploads/2021/06/OPHA-White-Paper-Summary-Transportation-and-Health-March-30-2016_-Fin.pdf

A key barrier repeatedly identified in the literature is the absence of data (e.g., to describe travel behavior) and knowledge (e.g., to identify and understand best practices). It is understood the Government of Yukon (Department of Highways and Public Works) does not have a permanent traffic monitoring program in place.

Provincial and Territorial-level data programs are traditionally design to monitor motor vehicle traffic on highways and freeways. Traffic data collection programs are used to determine current traffic patterns and help predict future traffic trends. Government staff uses the information to help support planning, design, construction, and operation of the road network on their jurisdiction. The data can also be useful for a wide range of stakeholders, including consultants, developers, other levels of government, and the public. To our knowledge, no Provincial or Territorial Government in Canada currently has a multi-modal traffic monitoring program. Furthermore, lack of safe, accessible active transportation infrastructure results in suppression of active travel, and thus demand for active transportation cannot be quantified through traffic monitoring.

The Federal Active Transportation Strategy's aim is to make data-driven and evidence-based investments to build new and expanded active transportation. Advocates and practitioners strongly voice the importance of data monitoring and the need for AT mobility data at various jurisdictional levels so that economic and feasibility analyses and business cases for investments in active transportation can be understood by elected officials and other key stakeholders. Data is also important for measuring and documenting the outcomes of specific initiatives, and of sharing lessons from their implementation through case studies or similar means.

8.2 Recommended Guiding Principles from Best Practices

8.2.1 Public Transit

The overarching principle for transit services is to focus on mobility. While the service must be financially sustainable, the primary goal of service is to fill a gap in access to services – to meet a mobility need to enhance quality and security of life.

- Principle #1: Focus on Accessibility

  Accessibility needs have been identified in two areas: physical and financial.

  Physical accessibility addressees the functional needs of travelers, ensuring that all riders can access stop infrastructure and vehicles, safely and securely.

  This means integrating accessible pedestrian and active transportation networks to connect to pick-up and drop-off locations as well as providing door-to-door access for those that need it.

It means providing stop infrastructure that provides safe refuge from both the environment as well traffic and other safety concerns. For guidelines in stop infrastructure design, the NACTO's Transit Design Guide[17] can be consulted.

And it means providing safe, accessible vehicles that meet the needs of riders. This is best served by a range of vehicles including sedans and minivans for people with lower degrees of functional disability, to low-floor or lift-equipped vehicles for riders with mobility devices.

Affordability is essentially a function of funding. Establishing affordable fares as a principle of the service requires additional operating funding to compensate for lower cost recovery from fares. There is considerable debate in the industry as to whether the goal should be to provide fare-free service. While fare-free options maximize the affordability at the personal level, they increase the requirement for operations funding (typically local) and otherwise divert funding from options that could increase service, such as higher frequency, extended hours of service or new service areas and corridors.

In coordinated services, it is important to have a consistent structure across all elements of the system, while protecting the autonomy of specific communities to serve their residents in the own specific ways.

- Principle #2: Develop transit-supportive environments.

  Transit services are enhanced by development factors typically described as the Six D's: Density, Distance, Design, Diversity, Destination, and Demand management. While the level of development in small northern communities does not provide significant scope for influencing overall land use patterns in favor of public transportation, there are still several principles from these factors that can be considered at the site level, particularly when municipalities and First Nations governments control much of the development process. When considering small, northern communities, elements of density and distance, followed by design then destination factors are most important. Diversity and demand management are appropriate to larger scale urban development.

  Density and Distance are closely related and can have a significant impact on the effectiveness of public transportation services. It is important to make residential and employment development areas as dense as possible, and to put the densest developments closest to potential transit routes. Distance to transit can also be

[17] https://nacto.org/publication/transit-street-design-guide/stations-stops/station-stop-principles/

affected by the provision of effective pedestrian connections from communities to transit stops.

Design elements that can influence the success of public transportation services include:

- Stop accessibility
- Safety and comfort elements such as appropriate lighting, including both at stop locations and on access routes
- Heated shelters and other stop amenities
- Pedestrian connections and cycling integration

Destination accessibility means maximizing the number of places a person can travel to using public transportation services. While the scale of northern development does not offer significant opportunities for multiple services to different destinations, the important principle is to not focus on, or assume single purpose trips, such as medical or employment trips, but allow for the widest possible range of trips purposes. (See Principle #5)

- Principle #3: Maximize use of existing and shared resources.

  Several First Nations throughout Yukon provide their communities with local shuttle service, which in cases serve either local transportation needs, inter-community connections, or both.

  Service agencies, particularly in the larger communities, often have vans or small shuttle buses for the use of their clients, in response to the same transportation gaps identified for the broader community. Finally, private operators provide shuttle services in several areas, though the cost of these for-profit series is often prohibitive for local trip purposes.

  Each of these, along with new transportation assets, represent an opportunity to share resources and increase the effectiveness and efficiency of transportation options. Volunteer ridesharing is the epitome of this concept.

- Principle #4 - Balance local and intercity travel needs

  It is important to recognize that local services are necessary while longer distance corridor trips might meet the greatest needs. Because inter-community transportation is being used to solve a lack of distribution of resources and local access, these options are often viewed as more important than local trips.

  An effective serve option cannot exclusively be one or the other, particularly where all local needs are not met within the community. Local services can be provided by a wide range of innovative options, including fixed route where demand warrants, on-demand services supported by technology and volunteer ridesharing services.

  Inter-community trips options cannot provide effective travel if local access to and from the route are not provided. In some cases, local and inter-community trips can be integrated with a route deviation that sees the inter-community vehicle provide direct

access to a small subset of local destinations. This can be especially effective at the ends of trips, where the route deviation does not inconvenience through passengers.

- Principle #5: Accommodate multiple trip options.

  While respecting the need to maintaining a financially sustainable service, it is important to provide trip options that meet a range of travel purpose needs. This means creating an in-depth understanding of the travel needs of the community: employment, medical, social, professional and such, and determining where the best balance of need and service potential lies. This in turn relies on effective and comprehensive community outreach.

  It is also important for individuals to be able to define their own trip purpose needs, and this should be reflected in trip eligibility criteria, if established. For example, in Ontario, under the AODA, it is not permitted to prioritize trips for specific purposes such as choosing to serve a medical trip over a recreational trip.

- Principle #6: Pilot innovative service strategies

  The documents reviewed in this study all identified a range of service options from volunteer networks to formal fixed route transit. Each can have a place in specific areas and at specific times, regardless of community size, and the decision to select a particular option should be rooted in empirical evidence as much as possible.

  Fixed route services could be expanded in Whitehorse, but other communities may have fixed route shuttles at key times of the day or for specific trip purposes. Existing shuttles are examples of mostly fixed routes and expanded corridor services will also be primarily fixed routes, particularly between communities. Corridor fixed routes can also be diverted to serve key points in a community enroute, where the location might not be directly on the corridor route, in some cases, these diversions can be regular, or on-demand in other cases.

  On-demand transit, assisted by booking and scheduling technology, can serve low-demand areas in a wide range of communities, from neighborhoods in larger communities (such as estate residential areas on the periphery of Whitehorse) to entire ‘bedroom’ communities in smaller neighboring municipalities,

  Ridesharing also has a place in a wide range of communities, depending on demand and the availability of volunteer pools. Technology supports for finding and booking rides can improve the effectiveness of these services, and this type of service represents an excellent opportunity for a pilot project. Because the success of these projects is quite unique to each community, it will be important for pilot projects to be

carefully designed to measure specific objectives, such as use of technology, trip purposes, trip distances and such.

Establishing pilot projects to obtain this evidence can be an effective means of testing options with real world conditions to gauge customer response, service design parameters and infrastructure needs.

An important caveat is that pilot projects can be self-limiting, where customers are reluctant to commit to a service without the confidence that it will be there in the long-term. The 'use-it-or-lose-it' approach is often self-defeating, causing potential rides to not use it, in case they lose it.

Pilot projects should be established with clear criteria for success and an effective data collection and monitoring program in place to ensure effective evaluation.

- Principle #7: Minimize operating costs and maximize access to upper tier and external funding.

  With limited operational funding available, it is important for services to be operated as efficiently as possible, maximizing the use of shared resources, leveraging regional planning and coordination activities and

  While capital funding is less problematic, it can still be limited, and a full understanding of existing and planned programs can be beneficial. For example, sidewalk and trail connection, eligible for capital funding under the Active Transportation Fund, can also be eligible under the Rural Transit Solutions fund if the funding supports capital construction of a facility to provide access to a transit stop.

8.2.2 Active Transportation

The following are some key winter-city active transportation principles found in the literature of winter-cycling and best practice examples. Winter-city active transportation principles are guiding principles and design considerations that promote safe, accessible, and enjoyable active transportation options in cities during the winter season. These principles aim to encourage year-round cycling, walking, and other non-motorized modes of transportation, even in colder climates.:

Principle #1 - Focus on commuting travel and utilitarian trips

Research into the relationship between winter climate and cycling is limited, yet evidence suggests that individuals who cycle in winter are generally committed and confident cyclists whose primary trip purpose is commuting to work or for utilitarian purpose. People walking and biking in winter are making the same kinds of trips as those they make during the rest of the year. They are getting to work or school, going to shop, visiting friends and relatives, accessing essential medical and social services, attending sporting events or worship services, or participating in a wide variety of other everyday activities. In addition, many people walking in winter are going to and from transit (i.e., bus, light rail, subway) services. Yet, most of the dedicated pedestrian

and cycling network in small rural municipalities in the Yukon is designed for recreational trips and access to nearby natural assets (i.e., lake, hiking trails, scenery boardwalks, tourism attractions, etc.)

Principle #2 – Winter Maintenance Is Key

Research on winter cycling concur that a lack of road surface maintenance is the primary deterrent to cycling, not temperature or weather specifically. Various studies also indicate that improved surface maintenance could lead to significant gains in the number of new users and mode share retention.

Prioritization and scheduling of snow clearance (and ice management when warranted) is the key to a successful winter bikeway program. For most jurisdictions, keeping all bikeways usable during or immediately after a heavy snow event is infeasible, however is demonstrated to be possible if made a priority by the community.

A hierarchical classification of routes should be established by level of use (i.e., Class A, B, C) and intensity of maintenance, providing the best maintenance standard to routes with the greatest number of people possible following a heavy storm.

Principle #3 – Dedicated off-street versus on-street cycling infrastructure is best.

Planning for a winter cycling network needs to address the fact that cyclists often prefer to travel routes that are separated from traffic on dedicated off-street facilities (i.e., MUPs, cycle tracks, etc.), yet in winter, some cyclists travel on major arterial or collector roads as they are maintained and predictable.

On-street marked bike lanes appear to be an easy solution however these are especially uncomfortable unsafe and frequently unusable for cyclists in snowy climates. With snow, bike lane demarcation becomes invisible creating confusion for all road users. The on-street lanes are typically unusable as they become filled with snow from the motor vehicle portion of the roadway. Parked vehicles adjacent to bike lanes can also become as safety hazards as maneuvering space for vehicles is more constrained. Bike lanes on road are also problematic for snow clearance perspective as they need a ‘second pass’ to plow, also at a lower speed than regular plow passes. They also require much more frequent plowing relative to separated infrastructure.

As evidence from best cases in European winter-city cycling examples, one of the key for success is the construction of dedicated off-road AT pathway systems, in some cases even known as cycling ‘highways’, for safe and segregated accommodation of cycling trips and alternative mobility vehicles such as e-snowmobiles, e-scooters and e-motorbikes. In fact, some Yukon communities (e.g., Teslin) have expressed desire for building off-road safe routes for walking, cycling, e-bikes, and other forms of zero emission mobility (e-quads, e-snowmobiles) that are currently using the roads and whose users include significant number of youth and adults without a car.

- Principle 4 - Education and Promotion

  To promote winter cycling effectively, a comprehensive education and promotion strategy is crucial. This strategy should aim to raise awareness, provide necessary

information, and create a positive attitude towards winter cycling. A “winter” city can promote a positive attitude towards winter by highlighting its efforts to improve conditions for cycling and this contributes to normalizing winter bicycle commuting and shifts the public perception that winter cyclists are ‘crazy’. Communication is essential to informing cyclists and all road users about the importance of sustainable transportation options. Public campaigns, community-led initiatives, winter route maps, road conditions, safe riding tips, trends and strategic plans information should be made available on government websites.

- Principle #4 – Leveraging Road Safety as Catalyst for AT improvement.

  Planning for winter cycling falls within existing transportation goals of improved road safety and maintenance.

  Vision Zero and the Safe Systems Approach are two interconnected concepts aimed at improving road safety and reducing traffic-related fatalities and serious injuries. Both approaches recognize that road crashes are preventable and advocate for a shift in thinking about road safety. The two concepts originated in Sweden in the 1990s but have rapidly been adopted in jurisdictions at all levels across North America.

  In the context of Vision Zero, the safety of pedestrians and cyclists is of paramount importance. Vision Zero seeks to eliminate all traffic-related fatalities and serious injuries, and achieving this goal necessitates a special focus on the safety of the most vulnerable road users, such as pedestrians and cyclists. Therefore, Vision Zero initiatives specifically target the improvement of safety conditions for these road users.

  Vision Zero plans, programs and initiatives are being adopted/developed at all levels of government, with a renovated impulse on allocating appropriate technical expertise and resources for implementation. Provincial transportation agencies, regional governments and local municipalities are developing Vision Zero programs to identify issues, needs, countermeasures, prioritization, and implementation plans (short- and long-term)

  In the context of winter and remote communities and the vulnerability of pedestrians and cyclists in the road system, as discuss in Finding #2, a logical starting point to addressing systemic road safety issues in communities across the Yukon, is to take advantage of reinvigorated Territorial interest in Road Safety improvements along highways segment within urban areas.

8.3 Recommended Guiding Structures

Planning and implementation for active and public transportation services will rely on a range of functions with specific responsibilities at each level: local, regional, and territorial. With these roles, it will be important to provide a coordinating framework that ensures effective communication, cooperation, and coordination between the three levels.

The figure below provides a conceptual idea of the proposed framework, identifying preliminary roles at each level. In this framework, various functions at each level need not be

the responsibility of any one agency or organization, especially in the short-term. The ultimate organizational structure should be determined as that best suited to the agencies at each level, though the higher the degree of coordination, even if effected by communication between sister agencies, the better.

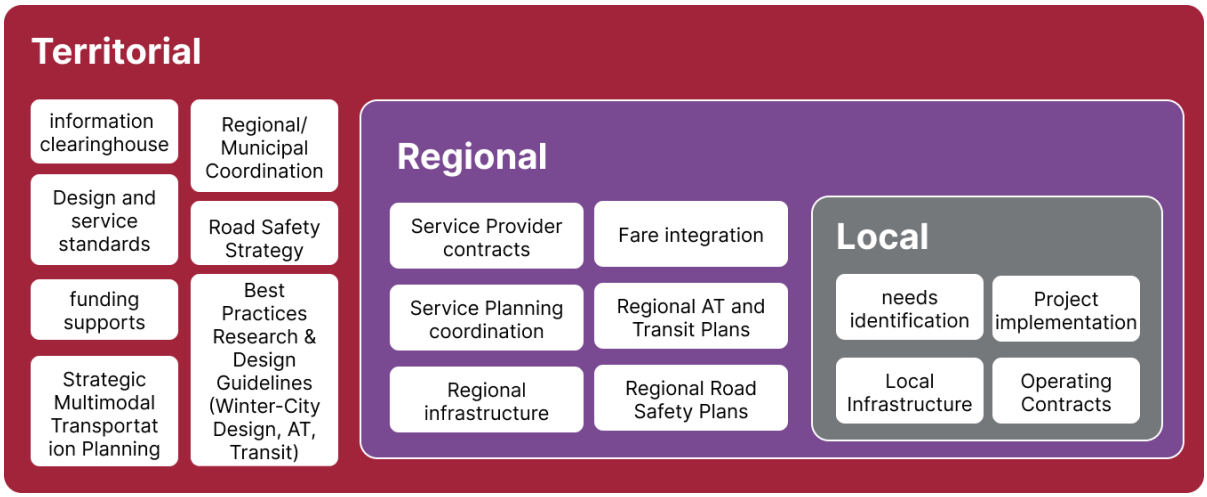

Figure 20. Conceptual framework of varying functions for public and active transportation by government levels.

The following section summarizes specific and actionable recommendations for both public and active transportation by level of government, based on findings, principles and background research.

8.3.1 Guidance for Municipalities and FN Governments (Local)

- **Guidance #A1** - Needs Identification

  Provision for active transportation, including the ownership, operation, and planning of facilities, is often the exclusive domain of municipalities. Although higher levels of governments can set service standards, formulate guidelines, and provide funding, municipalities must initiate active transportation projects.

  Travel needs are best identified at the local level and in conjunction with people who require and will use the service. This includes identifying travel patterns, purposes and modes, appropriate service models, technology supports, and infrastructure requirements.

  Given that this process needs to be replicated in most communities, and that services may be delivered regionally, there is a corresponding coordination role at the regional level.

- **Guidance #A2** – Public Transit Service Delivery

Local service components can be delivered by and within the local communities, either directly by employees of the municipality or First Nation, or by a third-party contractor.

Selection of an approach should consider the skills and resources that exist within the community, the need for regional coordination of service delivery, objectives such as providing employment supports for community members, and the availability of suitable contractors.

- **Guidance #A3** – Land Use Development & Municipal Bylaw controls

  Local governments are best positioned to identify needs and gaps in services and infrastructure, as well as to advocate for residents and adopt measures and bylaws to counter the adverse effects of transportation inequalities and historically underinvested and underserved communities which are generally dependent on alternative modes other than the private automobile.

  Local governments are enabled by Provincial and Territorial legislation to modify or replace outdated bylaws so that future development and redevelopment focus on creating complete communities where residents can live, work, play and relax within walking reach to opportunities, services and amenities. These can include rules related to land acquisition, zoning, subdivisions, active network planning, cycling and walking infrastructure standards, on- and off parking regulation, transit supportive development, bike parking and end-of-trip facilities, 'last-mile' connectivity, and other aspects that promote and regulate an integrated active and public transportation within their jurisdictions. Some of the most notable areas where local municipalities can focus to update controls and ordinances related to public and active transportation include the following:

  - Smart Growth: The U.S. Environmental Protection Agency's (EPA) Smart Growth Program synthetizes some "essential fixes" intended to help local urban governments get the smarter, more environmentally responsible, and sustainable communities they want. Eleven mutually complementary strategies are highlighted in the pursuit of smart growth, and their suggested code provision are categorized by modest adjustments, major modifications, and wholesome changes. The key areas for code modifications include:

    - Allow or Require Mixed-Use Zones
    - Use Urban Dimensions in Urban Places
    - Rein In and Reform the Use of Planned Unit Developments
    - Fix Parking Requirements
    - Increase Density and Intensity in Centers
    - Modernize Street Standards
    - Enact Standards to Foster Walkable Places
    - Designate and Support Preferred Growth Areas and Development Sites
    - Use Green Infrastructure to Manage Stormwater
    - Adopt Smart Annexation Policies
    - Encourage Appropriate Development Densities on The Edge

Additional information on each of the above topics can be consulted online in the (EPA) Smart Growth Program website. The resource is not intended to provide model codes or ordinances but rather to help local communities to evaluate their existing codes and ordinances and apply the information to achieve smart growth objectives. Although this document focuses primarily on suburban and urban communities, a similar report is under development regarding rural development.

- Complete Streets: Refers to the concept that roadways should be designed with all users in mind, not just motorists. Combined with integrated land use and sustainable transportation planning, and 'smart' growth land development, complete streets is a key strategy for reducing greenhouse gas emissions and inequalities from the transportation sector. Prioritizing complete street interventions and active transportation investments in local communities and vulnerable neighbourhoods should be uphold.

  Local municipalities can create and adopt 'complete street' policies or ordinances by various mechanisms, not exclusive to complete street but to other sustainable transportation best practices:

  - Council-driven ordinances or resolutions
  - Council approved Plans (i.e., relevant policy adopted within OCPs and TMPs which may include recommended guidelines and corridors for intervention)
  - Council approved official Complete Street Policy (tends to be lengthier and more detailed than resolutions or ordinances, and can build partnerships between agencies, community members, and decision makers)
  - Council-approved Complete Streets planning and design guidance or manual either by creating new guidance or simply changing important details such as street cross-section standards can be done in a short time.
  - Policy Directives, not as common but still useful, these could be either 'in-house' departmental directives or executive order to ensure that each street project's design is compliant with Complete Streets goals.
  - Citizen Driven in the form of Tax Levies to fund specific projects and transportation improvements, or community campaigns for a Ballot Measure, although rare, on an specific interventions highly supported by the public and not so much by government officials.

  The Washington Municipal Research and Services Center (MRSC) and Smart Growth America are just a few many non-for-profit organizations across the US that promote local empowerment for policy implementation. Among the elements recommended for local communities considering adopting new or updated Complete Streets policies, the following are considered key ones:

  - Establishes commitment and vision. How and why does the community want to complete its streets? This specifies a clear statement of intent

to create a complete, connected network and consider the needs of all users.

- Prioritizes underinvested and underserved communities. Requires jurisdictions to define who are their most underinvested and underserved communities and prioritize them throughout.
- Applies to all projects and phases. Instead of a limited set of projects, the policy applies to all new projects, retrofit or reconstruction projects, maintenance projects, and ongoing operations.
- Allows only clear exceptions. Any exceptions must be specific, with a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
- Mandates coordination. Requires private developers to comply, and interagency coordination between government departments and partner agencies.
- Adopts excellent design guidance. Directs agencies to use the latest and best design criteria and guidelines and sets a time frame for implementing this guidance.
- Requires proactive land-use planning. Considers every project's greater context, as well as the surrounding community's current and expected land-use and transportation needs.
- Measures progress. Establishes specific performance measures that match the goals of the broader vision, incorporate equity considerations, and are regularly reported to the public.
- Sets criteria for choosing projects. Creates or updates the criteria for choosing transportation projects so that Complete Streets projects are prioritized.
- Creates a plan for implementation. A formal commitment to the Complete Streets approach is only the beginning. It must include specific steps for implementing the policy in ways that will make a measurable impact on what gets built and where.

- Transit Orientated and/or Transit Supportive Development: As noted, municipal zoning bylaws can control physical changes to the built environment by placing limits on building heights, margins, and site-coverage ratios, densities and FARs, and the geographical distribution and combination of mixed land-uses around TODs. Some of the key paths for local bylaw reform in support of TODs include:

    - Acquiring land near stations or along transit corridors for social housing.
    - Applying TOD direct control zoning to control location of parking areas to enhance pedestrian access, connected street networks, including pedestrian and cycling connections, requirements for transit-supportive design features.
    - Offering subsidized transit passes for eligible households within TODs;
    - Reduced off-street parking requirements in TODs and require TDM commitments/monitoring for developments around or near transit.

- Increase the supply of affordable housing units in TOD zones —in doing so, focus on relatively high-density figures and relatively low inclusionary zoning requirements.
- Offer more aggressive subsidies for the development of affordable rental housing units in TODs and near transit—such increases could be funded by shifting existing subsidies from ownership units to rental units or lowering the cap on mortgage interest tax deductions.
- Incentivize landlords to keep existing units affordable after initial covenants have expired (i.e., reducing administrative burden on landlords, and/or offering funds to defray the costs of housing)
- Providing public transit and active transportation services between outlying employment locations where blue-collar and service employees work and the neighbourhoods where they live;
- Lead by example by establishing commute-trip reduction and TDM programs for large public sector employers.

- Parking Management: How a municipality manages parking has direct and indirect effects on how people travel and therefore impacts related issues like congestion, air pollution and emissions, road safety, land development patterns, cultural and economic activity, and street design. By implementing tailored parking strategies and bylaws that align with community needs, municipalities can maximize economic advantages while promoting a balanced and sustainable urban environment.

  Municipalities across North America have focused on parking minimum bylaws in nearly all types of developments, based on the premise that cars would be the dominant mode of transport and a necessity for travel in and around cities. These regulations predominantly focused on minimum parking supply rates for different uses and motor vehicle parking stall dimensions. This has led to an overabundance of unnecessary off-street parking lots and garages, all valuable space that could have been allocated to more housing, community space, or commercial uses.

  As for on-street parking, municipalities have also followed a similar path, primarily focusing on creating more free or underpriced curbside parking spaces, and/or building public parking structures, hence perpetuating a cycle of encouraging more motor vehicle trips rather than choosing alternative and more sustainable modes.

  Municipalities should be encouraged to undertake a comprehensive review of their outdated on- and off-street parking regulations an accompanied zoning regulation on a frequent basis (every 5 years at least) for better alignment with transportation sustainability goals and emerging transportation trends, including the following considerations:

  - Reduced or elimination of minimum parking supply rates, or
  - Parking supply rates informed by vehicle ownership and demand data

- Parking supply rates based on geographic location (e.g., lower rates in the downtown core area and in walkable village centres)
- Parking supply rates based on housing tenure (i.e., lower rates for rental housing and affordable housing)
- Parking supply rates based on the size of dwelling units (i.e., lower rates for smaller units)
- Maximum motor vehicle parking rates
- Minimum bicycle parking supply and end-of-trip facility requirements (i.e., showers, lockers, repair toolkit facilities) as well as design specifications for bicycle parking facilities.
- Parking supply rates that further incentivize affordable, rental and family housing
- Structured parking designs that promote green space and tree retention
- Formalized TDM programs that are effective at mode shift through alternatives to vehicle ownership with consideration of development type and accessibility of users
- More innovative bicycle parking systems, and space for personal mobility devices such as mobility scooters, e-bikes, e-snowmobiles
- Electric vehicle charging considerations.
- Provision of passenger and commercial loading consideration of emerging transportation trends (such as shared parking), new mobility services (ride-hail), and electrification
- Cash-in-lieu of off-street motor vehicle parking
- Further roces changes to expedite parking related variances.

On-street parking is generally regulated through Streets and Traffic Bylaws. These bylaws typically regulate various components of on-street parking management such time restrictions, metered parking, passenger and commercial loading, accessible parking, residential parking policies, etc.). Municipalities are encouraged to revisit or renew modern on-street parking and loading strategies and ordinances to better support economic health, public space management, and the sustainable transportation objectives. Emerging considerations include:

- Model parking zone strategies and appropriate regulations for different areas beyond downtown (i.e., residential parking areas, employment, commercial, industrial, tourism)
- Approaches and technologies to curbside demand management drawing similar winter and remote communities elsewhere.
- Approaches for fee and permit based on-street parking options beyond metered parking.
- Curbside management strategies for flexible curbside space use
- TOD parking regulations
- Demand-based pricing

- **Guidance # 4 - Pilot Projects**

In terms of investment in active transportation and public transit, municipalities and transit authorities can propose pilot projects and create the conditions for their adoption or success. Developing smaller-scale version of projects in real-life conditions with a pilot project grant such as the FCM Green Municipal Fund is highly recommended. Municipalities and municipal partners with a population of 20,000 or under may qualify for a grant of up to 80 per cent of eligible project costs. More specifically, these pilot projects can include citizens and other stakeholders at all stages of planning thereby going beyond mere cost-benefit analyses and avoiding their shortcomings. Examples of pilot projects may include:

- Ridesharing and ride hailing programs
- On-demand transportation solutions
- First- and last-mile solutions
- Bike sharing
- Connecting commuters to park-and-ride facilities
- Active transportation infrastructure (e.g., temporary bike lanes)
- Walking and cycling networks that promote accessibility and safety
- Integrated transportation solutions (e.g., bike share and transit) to reduce fuel consumption and promote transit use.
- Solutions to reduce personal vehicle use, reduce congestion and/or incent Zero Emission Vehicle adoption (e.g., low emission zones, commercial delivery vehicle measures)

8.3.2 Guidance for Regional Coordination (Regional)

- **Guidance #B1** – Regional Transit Plans and Coordination

Except where transit service is strictly local, there will be a need and a benefit for regional coordination of transit planning and delivery. The regional planning function does not currently exist. The elements described here could be the responsibility of a new organization in the long-term, either at the regional level, or at within the Yukon government. In the short-term, these functions will rely on coordination between municipalities and First Nations. This may be any number of communities working together, from pairs of nearby communities coordinating these service contracts to all jurisdictions in a broader region agreeing to coordinated activities through a regional working group. Potential opportunities include:

- Service planning - There may be a number of opportunities to coordinate service delivery among and between neighboring municipalities, including:
  - Integrating corridor and local service where possible, including diverting corridor trips (scheduled or on-demand) to serve local destinations.
  - Ensuring coordination between local and corridor trips where separate – integrating common stops and ensuring schedule coordination

- Fare integration – there is a clear regional role in coordinating fare integration between local services in various communities as well as between local and corridor services.

  Fare integration also supports service integration – once there is a common fare structure, it becomes much easier to integrate service connections, local and corridor services and local services between adjacent communities.

  Fare integration is also a significant benefit to riders, making the fare system much simpler and easy to understand, as well as facilitating fare adjustments over time

- Service contracts – There can be considerable benefit to coordinating service delivery contracts with third-party providers at the regional level. Taken to the highest level, this could include establishing a regional contract for services.

- Asset Management – Joint purchasing programs can save communities money in capital purchases and increase the likelihood of attracting external funding. These programs can be the coordination of separate procurement procedures and specification, like in the Ontario Joint Procurement program, or extended to region-wide procurement of common vehicles, like in the BC model.

8.3.3 Territory-Wide Guidance

- **Guidance #C1** - Strategic Active Transportation Planning and Policy Direction
  Several provinces have created active transportation strategies. Best case examples in Canada include British Columbia, Ontario, Québec, Prince Edward Island, and Nova Scotia. Provincial or Territorial strategic plans typically include strategic goals and objectives in terms of active mode shared mobility targets, GHG reductions, climate change alignments, jurisdictional actions plans, and resources and guides for development of active transportation networks. It is found also that many Provinces have developed significant policy and program to enable active transportation along roads and highways under their jurisdiction. Best examples of provincial level AT strategies include at a minimum:

  - Provincial network planning
  - Funding program to support AT planning, design and implementation.
  - Funding programs to support/promote AT modes (i.e., e-bike purchase grants e-scooters, winter cycling tourism, etc.)
  - Public engagement strategy and awareness campaign
  - Interjurisdictional coordination and alignment of policy and planning
  - Updating legislation to protect active transportation users from injury or death from vehicles (i.e. Vision Zero goals)
  - Setting travel mode targets, reduction of car trips and GHG emissions
  - Coordination mechanisms for shared investment on capital projects
  - Data collecting, sharing and monitoring programs.

- **<u>Guidance #C2</u>** – Leverage Road Safety & Vision Zero Planning to Enhance AT conditions.

  Addressing road safety issues along and across main highways through communities in the Territory, especially along main pedestrian activity segment, should be a high priority for a systemic approach to planning and safe accommodation of pedestrian and cycling activity in local jurisdictions.

  In light of Vision Zero principles to eliminate fatalities and serious injuries in the transportation system, a key priority should be to identify and prioritize high-risk locations in proximity to highways for appropriate mitigation measures (i.e. lowering vehicular speeds (safe speeds), safe pedestrian controlled crossing points, gateway treatments, improved lighting, etc.) as well as high-quality dedicated pedestrian connections between community assets, neighborhoods, recreational opportunities and natural assets.

  It should be noted that the YG's Transportation Department (through its Transportation Planning Branch) is currently advancing some of these initiatives, generally identified through the Department's Community Safety (CS) group, working with local municipalities to identify community transportation needs, applying for territorial and/or federal funding, procuring, or developing technical studies and managing implementation of improvements.

  As noted, planning for highway road safety and maintenance falls within existing Territorial transportation department's goals, policies, and programs. Leveraging existing policies, legislation, and programs to include AT road safety & Vision Zero along highway corridors through communities should be a priority:

    - **Develop a Territorial Road Safety Strategy** following successful examples such as BC and MB and building upon the National Canada's Road Safety Strategy. Like the BC strategy, the Yukon would be a collaborative framework recognizes the unique road safety challenges faced by Indigenous communities and understands the importance of working in conjunction with Indigenous partners to help reduce fatalities and serious injuries. The framework would outline the tools, data, initiatives, awareness campaigns and enforcement programs that are creating a road safety network in Yukon.

    - **Continue proactive support to local municipalities and FN governments in identification of AT related safety projects** to put forward for Territorial or Federal funding. Such support incudes continuation of Territorial funding for Road Safety Audits (RSA) and In-Service Road Safety Reviews (ISRSR) of municipal road networks in proximity to highways, which as discussed tend to concentrate the highest level of local multimodal travel activity.

- **<u>Guidance #C3 – Territorial Leadership for Regional/Municipal Coordination</u>**

Territorial coordination of municipal and regional activities will ensure optimal communication, consistency, and efficiency of services. This coordination role should specifically include:

- Information and data clearinghouse
  At the territorial level, this data collection and dissemination could be both top-down, with information from other jurisdictions and levels of government shared with the municipalities and First Nations; and bottom-up, with information and data from the local level collected and shared among the regions across the territory.

- Funding - A centralized function should be established to provide program monitoring and clearinghouse services with respect to available grants and funding programs. Specifically, the role should be to:
  - Ensure maximum use of RTSF
  - Monitor developments in PTF as program develops.
  - Coordinate project definitions and timing where appropriate to maximize eligibility for funding.

- Best Practices and Design Standards - Local communities and regions should have the benefit of industry-standard practices and design elements for their infrastructure. The territorial role in coordination can ensure an on-going review of best practice and emerging technologies in areas such as:
  - Vehicle electrification and zero-emission technologies
  - Stop and station design, including design for cold weather conditions
  - Vehicle specification
  - Technology enhancements for communication, booking and scheduling
  - Training and safety
  - Customer service
  - Service delivery methods

- Public Transportation planning – coordination of local and regional transit plans across the territory will help ensure consistency of service levels and delivery. This could take the form of assisting with coordination of:

  - pilot projects development and evaluation
  - fare and service coordination between local communities and broader regions
  - service eligibility criteria, where used
  - Incentives to local carriers to provide service; assist with outreach. This could include working with private service providers to establish programs to 'share seats' on existing shuttles, allowing local passengers to ride. This would increase flexibility for local travel and maximize the effective use of the existing resource

- **Guidance #C4 – Smart Commuting Initiative**
  Establishing community-based travel marketing programs regionally or territorially such as Smart Commute in the Greater Toronto and Hamilton Area (GTHA) and

TravelSmart in Germany (and marketed under a variety of names in Australia, Europe and North America). These community-based social marketing programs have proven to be successful in getting people out of their vehicles and into active and green modes of travel.

- **Guidance #C4 – Territorial Leadership in Active Transportation Initiatives**

  - Education and Promotion
    - Support (sponsor) local municipalities and FN governments to participate in Winter-City forums such as The Winter Cities Association which now includes organizations in North America, Europe, and Russia along with the International Association of Mayors of Northern Cities, works to celebrate the positives of winter while addressing the challenges. This includes conferences, forums, research, and magazine publications available to member cities. The Winter Cycling Congress is another opportunity. The 2024 Congress will be hosted in Edmonton, AB.

    - Social marketing campaigns about AT Territorial efforts, initiatives, funding, interjurisdictional groups, cycling campaigns, etc. to help change attitudes towards outdoor activity in winter and for individualized marketing efforts to support those who would consider using active modes of transport year-round with some additional supports or resources.

  - Conduct household travel behaviour surveys to identify trends in support for AT and other non-motorized alternatives modes as well as to individualize communities and households that have self-identified an interest in changing their travel behaviour from driving alone to sustainable forms of transport.

  - Design winter-specific bicycle route maps (local, regional, territorial) that highlights the best and safest routes for cycling during the colder months. The map would include main AT routes, shared roads with low traffic, and areas where snow clearance is a priority. Differentiate between regular cycling routes and winter-specific routes, so cyclists can plan their journeys accordingly.

  - Territory AT Website Information: Create a dedicated section on the YG official website that provides comprehensive information about winter cycling. This section could include related studies, winter route maps, guidelines for safe winter cycling, and details about the Territory efforts to improve cycling and walking safe conditions across the Territory.

References

[i] Canadian Urban Transit Association (CUTA). (2005). Towards a National Transit Strategy, Issue Paper No. 15, CUTA.

[ii] Canadian Urban Transit Association (CUTA). (2020). COVID-19: Public Transit and Green, Inclusive Recovery, CUTA.

[iii] Federation of Canadian Municipalities. 2019. “Building Better Lives Together | Federation of Canadian Municipalities.” November 2019. https://fcm.ca/en/resources/building-better-lives-together

[iv] Government of Quebec. 2018. “Sustainable Mobility Policy – 2030 - Transports Québec.” April 17, 2018. https://www.transports.gouv.qc.ca/en/Pages/sustainable-mobility-policy.aspx.

[v] Dowling, Kevin. (2019) An Introduction to the Provincial Gas Tax Program, Government of Ontario

[vi] Ontario Ministry of Transportation. (2019). Community Transportation Grant Program, Government of Ontario.

[vii] BC Transit Website

[viii] Breen, Sarah-Patricia, Courtney Sutherland, Mark Trueman, Ryan Gibson, and Sean Markey. 2021. *Navigating Rural: Place Based Transit Solutions for Rural Canada.*

[ix] “ArcGIS Web Application.” Accessed April 22, 2023. https://selkirk.maps.arcgis.com/apps/webappviewer/index.html?id=17c858b73a014fbfa55d712141847a73.

[x] Northern Alberta Development Council. 2000. “DEVELOPING SUSTAINABLE TRANSIT OPTIONS FOR SMALL COMMUNITIES.” Northern Alberta Development Council. https://nadc.ca/media/1194/sustainable-transit.pdf.

[xi] Hosen, Kenneth I, and Stu Powell. 2011. *Innovative Rural Transit Services*. *National Academies Press EBooks*. https://doi.org/10.17226/14605.

[xii] Martin, P. A. *Guide for Implementing Bus on Shoulder (BOS) Systems - TCRP Report 151.* National Academy of Sciences: Washington DC, 2012.

[xiii] National transit Authority. 2016. Guidance on Bus Stop Locations in Rural Areas.

[xiv] Indian Roads, *Congress Type Designs For Pick-Up Bus Stops on Rural (I.E. Non-Urban) Highways*, IRC: New Delhi, 1981.

[xvi] Canadian Urban Transit Association: 2019 Urban Transit Operating Statistics, CUTA, Toronto 2020

[xvii] Tran, Paula. 2023. “Alberta Announces $15M Investment in Low-Income Transit Programs across Province.” Global News. February 2, 2023. Accessed April 19, 2023. https://globalnews.ca/news/9454812/alberta-low-income-transit-program-funding/.

[xviii]"Transit Assistance for People with Disabilities." n.d. Government of Saskatchewan. Accessed April 16, 2023. https://www.saskatchewan.ca/government/municipal-administration/funding-finances-and-asset-management/funding/funding-transit-for-people-with-disabilities.

[xix] Communications Nova Scotia. 2023. "Apply for Funding to Help Assess the Need for and Develop a Transit Service in a Rural or Underserviced Urban Area: Nova Scotia Transit Research Incentive Program." Novascotia.Ca. May 8, 2023. https://beta.novascotia.ca/apply-funding-help-assess-need-and-develop-transit-service-rural-or-underserviced-urban-area-nova-scotia-transit-research-incentive-program.

[xx] Children, Seniors and Social Development. 2023. "Newfoundland and Labrador Community Transportation Program - Children, Seniors and Social Development." Children, Seniors and Social Development -. July 26, 2023. Accessed April 16, 2023, https://www.gov.nl.ca/cssd/grants/nl-transportation/.

Public Health Agency of Canada. 2014. "Mobilizing Knowledge on Active Transportation." Canada.Ca. October 13, 2014. https://www.canada.ca/en/public-health/services/health-promotion/healthy-living/physical-activity/mobilizing-knowledge-on-active-transportation.html#a4.

"Umbrella Final Agreement – Council of Yukon First Nations." 1990. https://cyfn.ca/agreements/umbrella-final-agreement/.

"Land Use Planning Council (Yukon)." 2023. Government of Yukon. July 30, 2023. https://yukon.ca/en/your-government/boards-and-committees/land-use-planning-council-yukon.

MTO. 2013. *Ontario Cycling Strategy*. Ministry of Transportation, Ontario.

Kärmeniemi, Mikko, Tiina Lankila, Emilia Rönkkö, et al. "Active Transportation Policy and Practice in the City of Oulu from 1998 to 2016—A Mixed Methods Study." The Journal of Transportation and Land Use 15, no. 1 (2022): 689–708.

Ellis, Jenn, and Kiri Staples Consulting. 2021. "What We Heard: Community Engagement in the Yukon Community Travel Project." Government of Yukon. https://yfncc.ca/wp-content/uploads/YCT-What-We-Heard-report-June-2021.pdf.

Yukon Bureau of Statistics. 2019. "Population Projections 2018." January 2019. https://yukon.ca/sites/yukon.ca/files/ybs/fin-population-projections-2018-2040.pdf.

Resilient North Consulting and Vector Research. 2021. "Yukon's Rural Transportation Challenge Considerations and Preliminary Options for Improving Intercommunity Travel." April 2021.

Té Khâ Planning and Development. 2009. "VILLAGE OF TESLIN OFFICIAL COMMUNITY PLAN." November 2009. https://static1.squarespace.com/static/5a1355c8d74cff26eb78da29/t/5c103da00ebbe88a73f4000b/1544568297270/Teslin+OCP-Final.pdf.

Morrison Hershfield. 2021. "Teslin Integrated Resource Plan." 2021.

Resilient North Consulting, Kiri Staples Consulting, and Engage Strategies. 2021. "Yukon Community Travel Project Final Report" June 2021.

Shewfelt Consulting. n.d. “Village of Mayo Official Community Plan 2016.” https://villageofmayo.ca/wp-content/uploads/2013/12/Official-Community-Plan-2016-1.pdf.

Built Environment Working Group. 2016. “Two Way Street Public Health and Transportation Working Together on Active Transportation: Findings from a Stakeholder Consultation.” March 30, 2016. https://opha.on.ca/wp-content/uploads/2021/06/OPHA-White-Paper-Summary-Transportation-and-Health-March-30-2016_-Fin.pdf.

“Station & Stop Principles | National Association of City Transportation Officials.” 2016. National Association of City Transportation Officials. May 2, 2016. https://nacto.org/publication/transit-street-design-guide/stations-stops/station-stop-principles/.

City of Whitehorse. n.d. “Whitehorse Transportation Master Plan 2022.” https://www.whitehorse.ca/whitehorse_project/2447/.

UMA Engineering Ltd. 2004. “2002 City-Wide Transportation Study Summary.” March 31, 2004. https://www.whitehorse.ca/wp-content/uploads/2022/05/2004CityWideTransportation.pdf.

City of Whitehorse. 2018. “Bicycle Network Plan 2018.” https://www.whitehorse.ca/wpcontent/uploads/2022/06/20180508CityofWhitehorseBi.pdf.

Stantec Consulting Ltd. 2019. “Downtown Parking Management Plan.” https://www.whitehorse.ca/wp-content/uploads/2022/05/2019DowntownParkingManagem.pdf. City of Whitehorse. 2019. “WHITEHORSE Transportation Demand Management Plan.” https://www.whitehorse.ca/wpcontent/uploads/2022/05/TDMCompletePlan.pdf.

Stantec Consulting Ltd. Transit Advisory Services. 2019. “City of Whitehorse Transit Master Plan.” Https://Www.Whitehorse.Ca/. https://www.whitehorse.ca/wp-content/uploads/2022/05/MasterPlan_Final_Apr10.pdf.

City of Dawson. 2016. “OFFICE CONSOLIDATION OF OFFICIAL COMMUNITY PLAN BYLAW 2018-18.” 2016. https://www.cityofdawson.ca/Home/DownloadDocument?docId=70fe2e58-d38b-4783-8c68-f8d9602dfb0a.

City of Dawson. n.d. Integrated Community Sustainability Plan. https://www.cityofdawson.ca/Home/DownloadDocument?docId=2b4fb3cb-45ad-4ed0-bf96-d1d1a1b4a8d2.

Jane of all Trades Consulting and Across the River Consulting. 2016. “Trail Management Plan.” March 2016. https://www.cityofdawson.ca/Home/DownloadDocument?docId=5370dee2-53c3-4f54-a17a-a36144dcb57b.

Town of Watson Lake. 2021. Official Community Plan. https://watsonlake.municipalwebsites.ca/ckfinder/connector?command=Proxy&lang=en&type=Files¤tFolder=%2F&hash=c245c263ce0eced480effe66bbede6b4d46c15ae&fileName=Bylaw%2021-10%20OCP(2).pdf.

Carmacks. 2021. “Official Community Plan.” 2021. https://carmacks.municipalwebsites.ca/Editor/images/Village%20of%20Carmacks%20OCP%20Draft%20v6%20-%20July%201%20downsize%20-%20new.pdf.

Town of Faro. n.d. “2022-2027 Strategic Plan.” https://faro2021.municipalwebsites.ca/ckfinder/connector?command=Proxy&lang=en&type=Files¤tFolder=%2F&hash=c245c263ce0eced480effe66bbede6b4d46c15ae&fileName=2022-02-22%20Strategic%20Plan%20Booklet%20-%20Approved%202022-06-28.pdf.

Westfall, Rachel, Yukon Bureau of Statistics. 2021. “Whitehorse Transportation and Commuting Survey 2021 Report.” https://emrlibrary.gov.yk.ca/environment/whitehorse-transportation-commuting-survey-report-2021.pdf.

Government of Yukon. 2020. “Our Clean Future: a Yukon strategy for climate change, energy and green economy.” https://yukon.ca/sites/yukon.ca/files/env/env-our-clean-future.pdf.

Yukon Climate Leadership Council. 2022. CLIMATE SHOT 2030 Recommendations on How to Reduce Yukon’s Greenhouse Gas Emissions by 45% by 2030. https://yukon.ca/sites/yukon.ca/files/env/env-climate-shot-2030.pdf.

Government of Yukon. 2022. Greenhouse Gas Emissions in the Yukon: 2020. https://yukon.ca/sites/yukon.ca/files/env/env-greenhouse-gas-emissions-yukon-2020.pdf.

Case Study Sources:

Highway 16 Transportation Action Plan

Ministry of Transportation and Infrastructure. 2022. "Highway 16 Transportation Action Plan - Province of British Columbia." September 1, 2022. Accessed April 2023. https://www2.gov.bc.ca/gov/content/transportation/transportation-reports-and-reference/reports-studies/planning-strategic-economic/highway16-action-plan.

BC Transit. 2016. "Highway 16 Action Plan: Inter-Community Transit Revised Service Options." October 2016. https://www.bctransit.com/documents/1507213431894.

BC Transit. n.d. "Public Engagement Summary Report Highway 16." https://www.bctransit.com/documents/1529721045603.

British Columbia, Ministry of Transportation and Infrastructure, Highway 16 Transportation Options Info Sheet, Victoria, March 2022

BC Society of Transition Houses, 2021. "BCSTH Transportation Research Project: Literature Review – BC Society of Transition Houses." n.d. https://bcsth.ca/publication/bcsth-transportation-research-project-literature-review/.

BC Transit, February 2022. "2022/23 – 2024/25 Service Plan" https://www.bctransit.com/documents/1529716234039

BC Transit, February 2023. "2023/24 – 2025/26 Service Plan" https://www.bctransit.com/documents/1529721617436

Whitecap Dakota First Nation Transit Service Plan

Fletcher, Dennis. Dennis Fletcher & Associates. Whitecap Dakota First Nation, Transit Service Plan – Final Report, March 2023

Fletcher, Dennis. Dennis Fletcher & Associates. Whitecap Dakota First Nation, Comprehensive Community Plan (Draft), October 22, 2022

Northern Transit Inter-Local

"Northern Transit Interlocal." n.d. https://northern.rural-transit.com/.

Federal Transit Administration. *Transit Agency Profiles: Tool County (8R02-80169), 2018-2021*. Washington DC: FTA.

John McGill Glacier. 2023. "Glacier County Renews Northern Transit Support." Golden Triangle News. March 22, 2023. Accessed April 2nd, 2023. http://www.cutbankpioneerpress.com/cut_bank_pioneer_press/article_7c4e0b06-c81c-11ed-ba0c-234ae8cdcd76.html.

Lynde, Asher. 2022. "More Passengers for Northern Transit Interlocal." *KRTV NEWS Great Falls*, November. Accessed April 3rd 2023. https://www.krtv.com/news/montana-and-regional-news/more-passengers-for-northern-transit interlocal?fbclid=IwAR0adjizzmbrILuOsPDczSAjxOo660Ya9Svhl2Md5BzvhRv1KrRg98MkQt4

Saugeen Mobility and Regional Transit (SMART)

Canadian Urban Transit Association. 2019. *Ontario Specialized Transit Services Fact Book*. No. RTS-20-21.

APPENDIX A

SUPPLEMENTARY BACKGROUND INFORMATION

MORRISON HERSHFIELD

People • Culture • Capabilities

1.1.1 Transport Canada

Canada’s multi-modal transportation system consists of several strategic assets and networks that span all regions of the country. Transport Canada is the department within the Government of Canada responsible for developing regulations, policies and services of road, rail, marine and air transportation in Canada. It is part of the Transportation, Infrastructure and Communities portfolio. The department was created in 1935, and it has since been responsible for regulating and overseeing all modes of transportation within Canada's borders.

Mandate

Transport Canada's mandate includes promoting safe, secure, and efficient transportation, as well as protecting the environment, and ensuring Canada's transportation system meets the needs of Canadians and the country's economy. In particular:

- To develop and implement policies, regulations, and programs that support a safe, secure, efficient, and environmentally responsible transportation system.
- To oversee the development and implementation of safety and security regulations for all modes of transportation, including aviation, marine, and rail.
- To manage and support the delivery of transportation infrastructure, such as airports, ports, and highways.
- To promote the growth and competitiveness of the transportation industry in Canada.
- To represent Canada's interests in international transportation organizations and negotiations.

Organization Structure

Transport Canada is organized into four main groups:

- Policy Group: responsible for developing policies, regulations, and programs related to transportation safety, security, and environmental sustainability.
- Safety and Security Group: responsible for overseeing the implementation of safety and security regulations for all modes of transportation, including aviation, marine, and rail.
- Transportation Infrastructure Group: responsible for managing and supporting the delivery of transportation infrastructure, such as airports, ports, and highways.
- Corporate Services Group: responsible for providing internal services to support the operations of the department.

Key Functions

Transport Canada's key functions include the following:

- Safety and Security Regulation: Transport Canada develops and implements safety and security regulations for all modes of transportation, including aviation, marine, and rail. These regulations cover everything from aircraft maintenance to port security to railroad safety.

- Infrastructure Development and Support: Transport Canada manages and supports the development of transportation infrastructure, such as airports, ports, and highways. This includes providing funding, conducting feasibility studies, and managing construction projects.
- Research and Development: Transport Canada conducts research and development activities to support the development of transportation policies, regulations, and programs. This includes research on new transportation technologies, environmental sustainability, and safety and security.
- Industry Promotion and Development: Transport Canada promotes the growth and competitiveness of the transportation industry in Canada. This includes working with industry stakeholders to identify opportunities for growth and providing funding and other support for transportation-related projects.
- International Engagement: Transport Canada represents Canada's interests in international transportation organizations and negotiations. This includes working with other countries to develop international transportation policies and regulations and participating in international transportation forums and meetings.


MORRISON HERSHFIELD