



Town of Okotoks

ACTIVE TRANSPORTATION IMPLEMENTATION PLAN

NOVEMBER
2024



TOWN OF OKOTOKS

Active Transportation Implementation Plan

Prepared For: Town of Okotoks
Date: November 22, 2024
Our File No: 4129.T01

WATT CALGARY
1300 – 736 6th Ave SW
Calgary, AB T2P 3T7
403-273-9001



ACKNOWLEDGEMENTS

Territorial Acknowledgement

Okotoks acknowledges the traditional territories of the people of the Treaty 7 region in Southern Alberta, which includes Blackfoot Confederacy members Siksika, Piikani, and the Kainai First Nations, the Stoney Nakoda of Bearspaw, Chiniki and Wesley First Nations, the Dene of Tsuut'ina First Nations, and the Métis Nation Region 3, and all those that made Treaty 7 lands their home. Okotoks also acknowledges the traditional territories of the Ktunaxa Nation. Okotoks recognizes the historic achievements and contributions of Indigenous people and their key role in the development of the Calgary Metropolitan Region and Okotoks. The Town remains committed to respecting Indigenous culture and reconciliation, and promoting the awareness and recognition of Indigenous people.

Grant Acknowledgement

The preparation of the Active Transportation Implementation Plan was carried out with assistance from a \$50,000 grant from the Government of Canada Active Transportation Fund.



Project Acknowledgements

WATT Consulting Group would like to thank Okotoks residents, Town staff, elected officials, and others who provided invaluable feedback in the first round of public engagement. The Active Transportation Implementation Plan was a highly collaborative and iterative process involving members from the consulting team and Town staff.

WATT Consulting Group:

- Tim Shah, MCIP
- Mallory Lowes, MCP
- Brendan Stevenson, P.Eng, PTOE
- Adrian Myszka, MCP

Intelligent Futures:

- Shayna Wedderburn, M.Pl
- Cassandra Caiger, RPP, MCIP

Town staff:

- Mitch Thompson, P.Eng
- James Camerson, P.Eng
- Andrea Charlebois, BCS
- Lesley Jimmo
- Jeff Morcom

WATT would also like to acknowledge Niki Burkinshaw (P.Eng) and Olga Kochkareva for their invaluable contributions to the development of the ATIP.

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Purpose of the Plan	1
1.2	What is Active Transportation?	2
1.2.1	Universal Design	4
1.2.2	Transportation Equity	5
1.3	Plan Process	6
1.4	Active Transportation in Okotoks Today	7
1.5	Planning & Policy Context	9
2.0	COMMUNITY PROFILE	12
2.1	Demographic Overview	12
2.2	Transportation Mode Share	12
2.3	Land Use + Key Destinations	14
3.0	PRIORITY PROJECTS	18
3.1	Overview	18
3.2	Active Transportation Needs Analysis	18
3.2.1	Methodology	18
3.2.2	Results	21
3.3	Facility Types	27
3.4	Identified Projects	32
3.5	Active Transportation Facility Design Guidance	39
3.5.1	Quick-build Facilities	42
3.6	Intersection & Crossing Improvements	44
3.6.1	Major Intersections	44
3.6.2	Minor Intersections + Crossings	46
3.6.3	Intersection & Crossing Design Guidance	49

4.0	COMMUNITY ENGAGEMENT	53
4.1	Overview	53
4.2	What Was Done	54
4.3	What We Learned	55
	4.3.1 Project Locations.....	55
5.0	IMPLEMENTATION PROGRAM.....	56
5.1	Project Evaluation	56
5.2	Project Phasing	60
5.3	Costing	63
5.4	Funding Opportunities	64
	5.4.1 Capital Planning	64
	5.4.2 Private Development.....	64
	5.4.3 External Funding	64
5.5	Monitoring & Evaluation	65
6.0	SUPPORTIVE POLICIES & PROGRAMS.....	67
6.1	Programs to Support Active Transportation	67
6.2	Policies, Bylaws & Administrative Procedures:	69
6.3	Maintenance Considerations.....	71
	6.3.1 Cycling Facility Design for Snow Storage.....	71
	6.3.2 Facility Sweeping.....	72
	6.3.3 Maintenance of Signage and Pavement Markings.....	73
7.0	NEXT STEPS	74

TABLES

Table 1 – Summary of Criteria for Pedestrian Needs Analysis.....	19
Table 2 – Summary of Criteria for Cycling Needs Analysis	20
Table 3 – Summary of Hot Spot Locations (Pedestrian Needs Analysis)	21
Table 4 – Summary of Hot Spot Locations (Cycling Needs Analysis)	24
Table 5 – Summary of Recommended Multi-Use Pathway Facilities.....	34
Table 6 – Summary of Recommended Sidewalk Facilities.....	36
Table 7 – Summary of Recommended Cycling Facilities	37
Table 8 – Summary of Recommended Neighbourhood Bikeways	37
Table 9 – Facility Design Guidance	39
Table 10 – Summary of Major Intersection Improvement Locations.....	44
Table 11 – Summary of Minor Intersection Improvements + Crossing Locations	46
Table 12 – Project Evaluation Criteria	56
Table 13 – Project Evaluation: Multi-use Pathways	57
Table 14 – Project Evaluation: Neighbourhood Bikeways	58
Table 15 – Project Evaluation: Other Projects.....	59
Table 16 – Cost Estimate – Select Priority Facilities	63
Table 17 – Measuring the Success of the ATIP.....	66

1.0 INTRODUCTION

1.1 Purpose of the Plan

With Sheep River at its heart, the Town of Okotoks is situated in the foothills of the Rocky Mountains within the larger Calgary region. It is home to an abundance of outdoor opportunities, sporting events and activities, boutique shopping, and rich heritage. The community has a vibrant network of recreational parks and trails that are utilized year-round by residents and visitors alike.

As such, the Town is in a favourable position to leverage its existing recreational and transportation network to support an environment for more active and sustainable transportation options as the community continues to grow and develop. To accomplish this, the Town has prepared an Active Transportation Implementation Plan (ATIP) that contains a prioritized list of active transportation infrastructure projects to improve the safety, accessibility, and connectivity of Okotoks' pathway and sidewalk system – the active transportation network. The ATIP, which is intended as a 10-year planning document, outlines both the infrastructure improvements and supportive policies and programs that are required to develop an active transportation network that works for all ages and abilities.

This project builds on the 2015 Active Transportation Strategy, which has a long-term goal to transform a vehicle-reliant community into a place where all residents – including walkers, motorists, cyclists, those using mobility aids, and other users – share a common vision and goal for future transportation needs.

The goals of the ATIP are:



Connectivity. To provide a more connected network that allows residents – and visitors – to use active transportation modes for all of their work and recreational trip purposes.



All Ages and Abilities. To develop a more inclusive, accessible, and connected transportation network that works for people of all ages and abilities – an accessible network is one that works for everyone.



Active Transportation Culture. To support a culture of active transportation, providing choice, promoting a healthy community, and considering active transportation in all new transportation investments.

1.2 What is Active Transportation?

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, cross-country skis and more.

Active Transportation users are a diverse group and include those who are walking, cycling, rolling (e.g., skateboarding, longboarding, scootering) and people using mobility devices such as wheelchairs, walkers, and strollers. All of these forms of human-powered travel are pursued for a variety of reasons: some people may choose to walk for recreation, others may bike to work, some may use active transportation due to the lack of a personal vehicle, and others may choose to travel this way for environmental reasons. The reasons to travel via active transportation are multi-fold and so are the benefits.

Benefits of Active Transportation



Active transportation can reduce health risks and chronic illnesses that are due to inactivity and can improve physical strength and mental health.



Active transportation can reduce greenhouse gas emissions and air, noise and light pollution, while increasing the use of green space.



Active transportation facilities can improve community accessibility and connectivity, which can encourage opportunities for social interaction.



Active transportation can reduce costs of personal transportation, infrastructure and health care, while increasing tourism potential by having destinations that are more accessible and attractive.



Active transportation facilities that are well-designed enhance the overall visibility of active transportation users, helping to reduce the risk of collisions and fatalities, in addition to reducing the number of vehicles on the road.

Figure 1 – The Benefits of Active Transportation

1.2.1 Universal Design

Active transportation has a critical accessibility component to ensure facilities are safe and convenient for all users, regardless of their age, ability, body, or perception, which can be established through universal design. Universal design is an approach to the structuring of an environment using guiding principles to inform the accessible design of specific improvements, and to help evaluate the suitability or effectiveness of a particular design intervention. The seven principles of universal design are described below.

The benefits of universal design are far reaching. It serves people with disabilities or mobility challenges, the elderly, parents with strollers, children growing into their bodies, people who have sustained injuries, neurodivergent individuals, and those making deliveries.



Credit: City of Kelowna

Seven Principles of Universal Design

1. Equitable Use

The design is useful and marketable to people with diverse abilities.

2. Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

3. Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

4. Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

5. Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

6. Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

7. Size and Space for Approach and Use

Appropriate size and space are allotted for approach, reach and manipulation regardless of physical characteristics such as size or mobility.

1.2.2 Transportation Equity

Equity is becoming a more prominent part of active transportation planning in North America. **Transportation equity** refers to the distribution of impacts (benefits and costs) and whether the distribution of impacts is considered fair and appropriate. These equity impacts can include the quality of available transportation choices, indirect and external costs, transportation expenditures, and public resource allocation, among others. Well designed and maintained facilities make access to transportation more equitable by allowing active modes to travel safely and comfortably.¹

The Okotoks ATIP process involved a detailed needs analysis of transportation priorities in the community, which factored in relevant equity indicators. See **Section 3.0** for more information about the Active Transportation Needs Analysis methodology.

¹ Government of BC. (2019). BC Active Transportation Design Guide. Chapter B: Setting the Context. Available online at: https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/cycling-infrastructure-funding/active-transportation-guide-low-res/2019-06-14_bcatdg_section_b_rfs.pdf

1.3 Plan Process

The ATIP began in August 2023 and wrapped up in December 2024. The project had several key milestones, as shown in the graphic below.



Figure 2 – ATIP Project Timeline

1.4 Active Transportation in Okotoks Today

Okotoks is known for being an active community with its extensive pathway network that has, and continues to, support several recreational opportunities. The following describes the types of active transportation facilities found in Okotoks today.



Multi-Use Pathway

Multi-use pathways are common in Okotoks. They are referred to as pathways and/or parkways. With 100 kilometres of existing pathways, the community benefits from an extensive network making it easier for residents to recreate, travel to work, or use the system for another trip purpose. What makes them “multi-use” is that they are intended for multiple active transportation users including people walking, cycling and rolling. While some of Okotoks existing pathways are multi-use in nature, others could benefit from being wider with clear signage.



Separated Sidewalk

Separated sidewalks are found across Okotoks' transportation network. A separated sidewalk has a 'furnishing zone' or boulevard that separates the sidewalk from the roadway. The furnishing zone acts like a buffer and enhances pedestrian safety and comfort while providing a space for sidewalk amenities and utilities.

People cycling are permitted to bike on sidewalk facilities across Okotoks.



Non-Separated Sidewalk

A non-separated sidewalk is a facility dedicated to people walking and rolling and is adjacent to the roadway. Unlike a separated sidewalk, these types of facilities may not be comfortable for all users due to proximity to the roadway.

People cycling are permitted to bike on sidewalk facilities across Okotoks.



Painted Bicycle Lanes

While not common in Okotoks today, painted bicycle lanes refer to on-road facilities that have a separate travel lane designated exclusively for bicycle use. The bike lane is delineated by a painted line and, in some cases, a painted buffer area. Painted bicycle lanes are found on Sandstone Drive. People cycling on roads are treated as vehicles per Town bylaws.

1.5 Planning & Policy Context

The ATIP is not starting from scratch. There are several plans, strategies and initiatives that the Town has completed to date that have set the policy foundation for implementation of an active transportation plan, as shown below.

Uniquely Okotoks: Municipal Development Plan (2021)



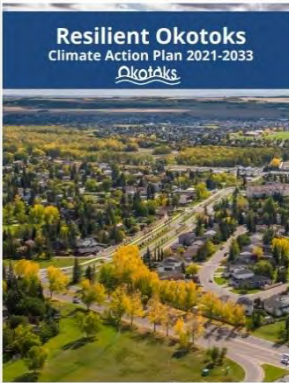
Overview:

The Municipal Development Plan (MDP) provides guidance for how the Okotoks community will develop and change over time. Municipalities in Alberta are required to have an MDP to plan future land use, development, and transportation, among other items.

Relevance:

Future land use and development plans help determine density and travel patterns, and how the overall transportation network can adapt to accommodate a growing community. Policy 3.1 refers to creating a safe, equitable, sustainable and multi-modal transportation network, with specific actions including prioritizing sustainable modes of transportation, rethinking streets to prioritize people, embracing winter in street design, employing Universal Design principles when designing AT infrastructure, to name a few.

Resilient Okotoks: Climate Action Plan (2021-2033)



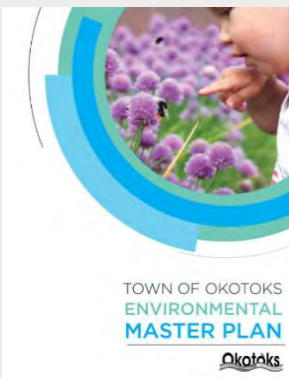
Overview:

The Climate Action Plan is intended to guide the Town's target of achieving carbon neutrality by 2050, while also making the community more resilient.

Relevance:

Action TL4 in the Climate Action Plan is to develop a comprehensive mobility plan that includes all forms of transportation (e.g. roadways, public transit, active transportation, rail) and specific objectives to improve active transportation access to downtown; increase the percentage of children using active transportation to get to school; and improve active transportation in existing neighbourhoods and commercial areas.

Town of Okotoks Environmental Master Plan (2018)



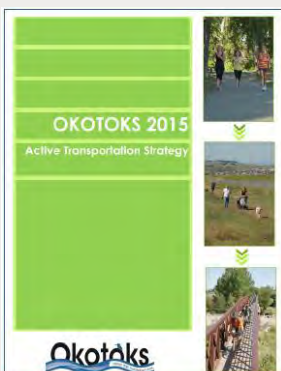
Overview:

The Environmental Master Plan (EMP) outlines a set of strategies to set Okotoks on a path towards environmental excellence and its vision to be a thriving, sustainable community.

Relevance:

One of the targets of the EMP is to increase percentage of trips made using transit or active transportation by 25% by 2033.

Okotoks Active Transportation Strategy (2015)



Overview:

The Okotoks Active Transportation Strategy provides a long-term vision that highlights the key benefits of improved active transportation opportunities and proposes strategies for implementation, to enhance choice.

Relevance:

The Active Transportation Strategy set the foundation for goals and implementation priorities that the ATIP is building from.

Council Purpose Statement

The Town of Okotoks' Council has developed a purpose statement on "Integrated and Accessible Transportation":

"Okotoks has integrated, connected, multi-modal, sustainable transportation options to better support active transportation and people walking, bicycling, and rolling, and transit riders, while also facilitating automobile access for the benefit of our citizens and the environment."



2.0 COMMUNITY PROFILE

2.1 Demographic Overview

As indicated in the 2021 Statistics Canada census, the Town's population was 30,214 people, which is roughly a 5% increase from 2016 (28,833).² This growth is in line with the province of Alberta's overall population increase of 4.8% since 2016. Just over half of the Town's population is female, with 49% being male.

The Town's median age is 39.2, which is only slightly higher than the province's median age of 38.4. Approximately 64% of the Town's population is between the age of 15 to 64 years old, which is the age group that is most anticipated to use active transportation modes and will have the easiest time shifting from single occupancy vehicles. Of this age group, 27% are between 15 – 30, which is the age range most likely to rely on active transportation.

The median after-tax income of households in 2020 was \$118,000 (\$101,000, after-tax). Approximately 6% of the total population is in low income, based on the low-income measure, after-tax.

2.2 Transportation Mode Share

In 2021, the main mode of commuting to work was using a vehicle as a driver (87%) or as a passenger (5%). After a vehicle, walking was the next highest commuting mode (4%), followed by "other" (taxi, scooter, school bus, etc.) at 3%, transit (1%) and cycling (0.4%).

Almost 30% of working residents commute between 30-44 minutes to their usual place of work; likely to Calgary due to its proximity. This could contribute to the higher vehicle mode share in Okotoks. However, 34% of the working resident sample have a commute of less than 15 minutes, which are trips that can be accommodated with an active mode.

The impacts of the COVID-19 pandemic must be considered in the context of the 2021 census commuting data, which is not indicative of current transportation trends that involve more in-person activities. As such, 2016 census data is more representative of current conditions. Although 2016 showed similar commuting trends with driving a

² Statistics Canada. (2021). Census Profile, Okotoks. Available online at: <https://tinyurl.com/33fv4eyp>

vehicle being the most common mode, there was slightly more transit use (3%) and fewer vehicle passengers (4%) than 2021. See **Figure 2**.

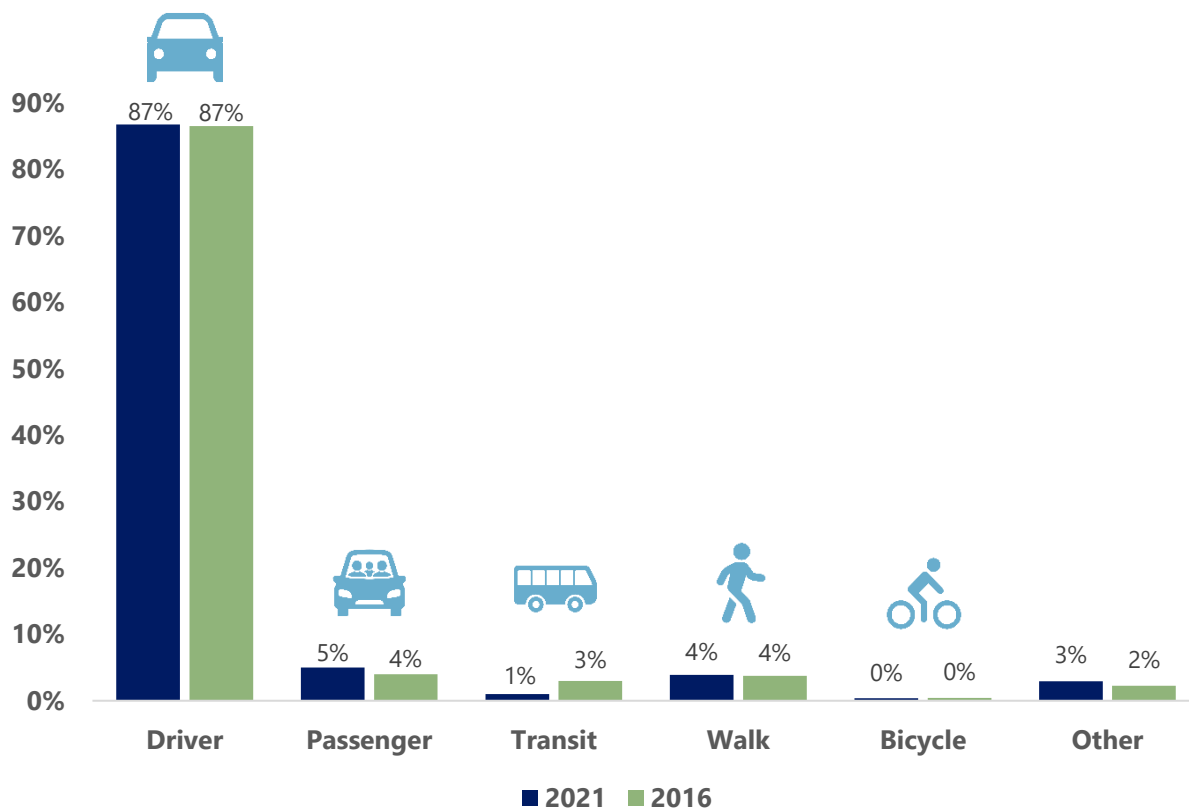


Figure 3 – Okotoks Main Mode of Commuting, 2021 vs. 2016

2.3 Land Use + Key Destinations

Okotoks has a variety of key destinations around the community ranging from schools, parks and recreation facilities, and commercial hubs. All these destinations are currently accessible by driving, but not all are easy—and safe—to access via active transportation modes. Therefore, understanding where people currently travel to (and want to go), is a critical part of active transportation planning (see **Map 1**).

Commercial Hubs:

- Centennial Village
- Cornerstone
- D'Arcy Crossing
- Downtown Okotoks
- Drake Landing
- North Gateway Centre
- Okotoks Business Park
- Southbank Business Park
- Southridge & Northridge Drives
- Westmount Centre

Schools:

- Good Shepherd Elementary School
- Percy Pegler Elementary School
- Big Rock Elementary School
- St. Mary's Elementary School
- Dr. Morris Gibson School
- Meadow Ridge School
- Holy Trinity Academy
- Okotoks Junior High School
- Ecole Beausoleil
- Foothills Composite High School
- St. John Paul II Collegiate

Parks and Recreation:

- Vikings Rentals Centre (formerly Centennial Arenas)
- Okotoks Recreation Centre
- Seaman Stadium
- Laudan Park
- Wylie Athletic Park
- Bill Robertson Park
- Crystal Shores Park
- Woodgrove Park

Arts and Culture:

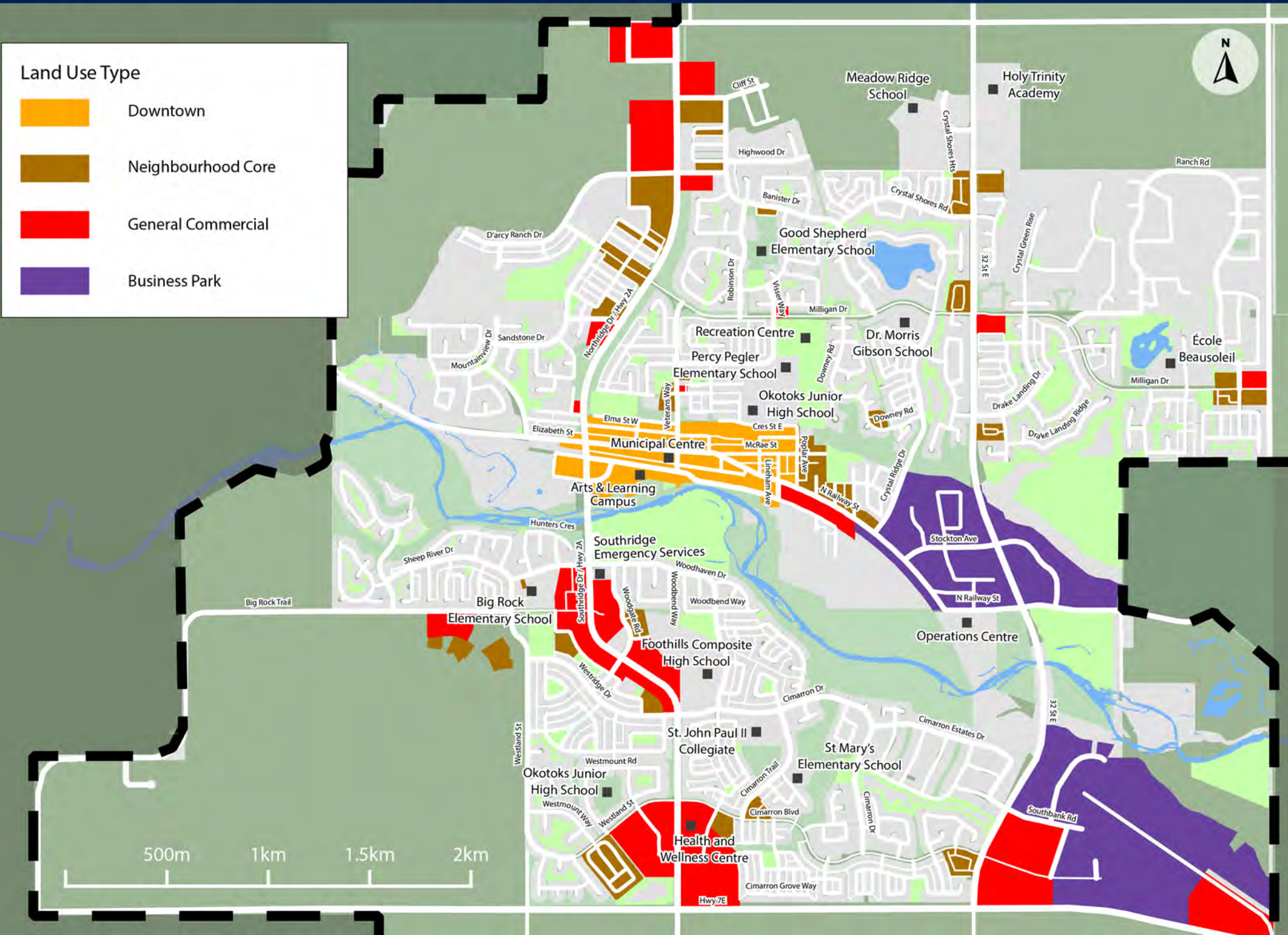
- Old Church Theatre (formerly RPAC)
- Okotoks Museum & Archives
- Okotoks Art Gallery & Visitor Information Centre
- Okotoks Public Library

Health & Community:

- Southridge Emergency Services
- Okotoks Health and Wellness Centre
- Town of Okotoks Municipal Centre
- Okotoks Operations Centre

Land Use Type

	Downtown
	Neighbourhood Core
	General Commercial
	Business Park



3.0 PRIORITY PROJECTS

3.1 Overview

Following a detailed review of Okotoks' existing planning and policy context, the project team undertook an active transportation needs analysis, which is discussed in detail below.

3.2 Active Transportation Needs Analysis

One of the goals of the ATIP is to “develop a more inclusive, accessible, and connected transportation network that works for people of all ages and abilities – an accessible network is one that works for everyone.” Achieving this goal will require careful planning and design of an active transportation network that not only responds to areas where there is (or might be) higher need for active transportation, but also where vulnerable populations (e.g., youth, seniors, those with mobility impairments) stand to benefit the greatest.

In summary, the purpose of the active transportation needs analysis was two-fold:

1. Document the types of active transportation facilities that exist in the town today
2. Determine where new active transportation facilities should be considered and/or upgraded based on the highest “need”

3.2.1 Methodology

The needs analysis was completed using a Geographic Information Systems (GIS) approach to identify locations of highest need. Two needs analyses were completed—one for the pedestrian network and one for the cycling network. The pedestrian needs analysis relied on 12 distinct criteria, presented in **Table 1** below. The cycling needs analysis followed a similar methodology and with eight distinct criteria shown in **Table 2**.

All of the criteria were spatially mapped and combined into a ‘level of need’ score. Road segments were used as the unit of analysis, which allowed the project team to produce a level of need score for over 1,400 road segments within the town. The following scoring classifications were used for the network needs analysis:

- Low Need = 1
- Low to Medium Need = 2
- Medium Need = 3
- Medium to High Need = 4
- High Need = 5

Table 1 – Summary of Criteria for Pedestrian Needs Analysis

Criterion	Description	Data Source
Road Classification	Road classification and motor vehicle speed are critical for determining the type of pedestrian facility that is warranted. As motor vehicle speed data are not available for each road in the town, road classification can be used as a proxy as busier roads are less comfortable for people walking.	Town of Okotoks
Sidewalk Condition	All sidewalks with a “quality 3” condition indicate the location has a major defect.	Town of Okotoks
Schools (within 250m & within 251-500m)	The lack of safe pedestrian facilities around schools can act as a barrier to walking.	Town of Okotoks
Land Use Designations	Land use designations provide an indication of anticipated pedestrian activity as growth occurs in the town. Both existing and future land uses were included.	Town of Okotoks
Individual Median Income <\$48,000	Individual median income represents a component of transportation equity. Areas where individual median income was lower than \$48,000 have higher need.	Statistics Canada Census, 2021
Transit	Pick-up and drop off locations of the Town’s on-demand transit were used as a proxy for where people may start and end their walking trip.	Town of Okotoks
Trip Generators / Key Destinations (within 250m)	Represents where people are (or would like to) walk to.	Town of Okotoks
Proximity to Pathways	A sidewalk gap may exist in locations that are in proximity to a pathway, which presents an opportunity to “fill” the gap.	Town of Okotoks
Connection to Informal Trails	A sidewalk gap may exist in locations that are in proximity to an informal trail, which presents an opportunity to “fill” the gap.	Town of Okotoks
Pedestrian Pathway Utilization (Strava)	Strava is a mobile app tracking human exercise and incorporates social network features. It is mostly used for cycling and running using GPS data. Strava provides an indication of some walking activity and walking desire lines in a community.	Strava
Youth Density	Youth are considered a “vulnerable population” and represent a component of transportation equity.	Statistics Canada Census, 2021
Seniors Density	Seniors are considered a “vulnerable population” and represent a component of transportation equity.	Statistics Canada Census, 2021

Table 2 – Summary of Criteria for Cycling Needs Analysis

Criterion	Description	Data Source
Road Classification	Road classification and motor vehicle speed are critical for determining the type of cycling facility that is warranted. As motor vehicle speed data are not available for each road in the town, road classification can be used as a proxy as busier roads are less comfortable for people cycling.	Town of Okotoks
Schools (within 250m & within 251-500m)	The lack of safe cycling facilities around schools can act as a barrier to cycling.	Town of Okotoks
Land Use Designations	Land use designations provide an indication of anticipated cycling activity as growth occurs in the town. Both existing and future land uses were included.	Town of Okotoks
Individual Median Income <\$48,000	Individual median income represents a component of transportation equity. Areas where individual median income was lower than \$48,000 have higher need.	Statistics Canada Census, 2021
Trip Generators / Key Destinations (within 250m)	Represents where people are (or would like to) cycle to.	Town of Okotoks
Cycling Pathway Utilization (Strava)	Strava is a mobile app tracking human exercise and incorporates social network features. It is mostly used for cycling and running using GPS data. Strava provides an indication of some cycling activity and cycling desire lines in a community.	Strava
Youth Density	Youth are considered a “vulnerable population” and represent a component of transportation equity.	Statistics Canada Census, 2021
Seniors Density	Seniors are considered a “vulnerable population” and represent a component of transportation equity.	Statistics Canada Census, 2021

3.2.2 Results

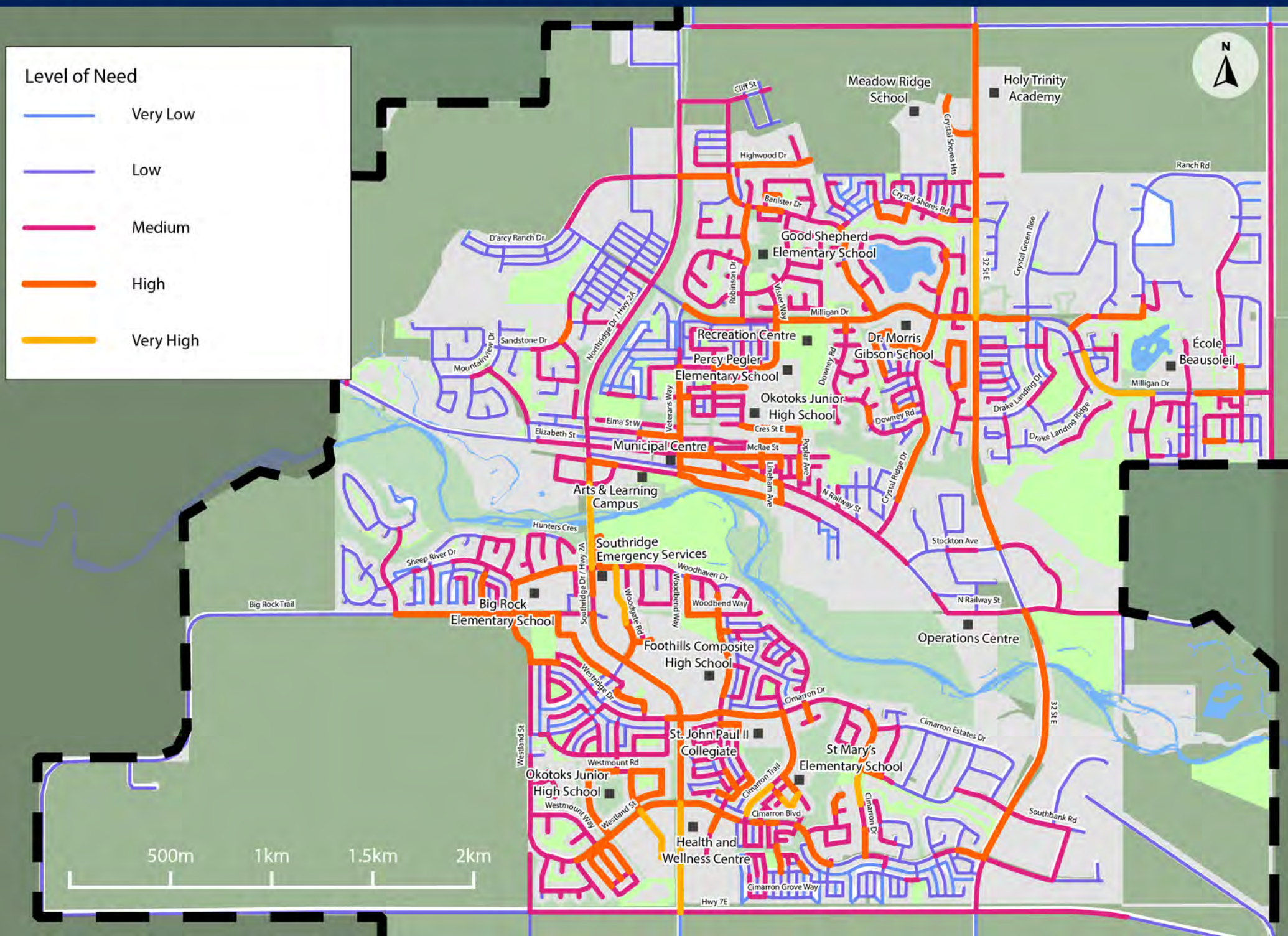
Map 2 illustrates the results for the pedestrian needs analysis and **Table 3** includes a discussion of the hot spot locations (i.e., those with highest need). Note, the table only includes the locations that scored highest in pedestrian need. There are many other locations that scored medium/high in pedestrian need that are not shown in the table but were considered when developing the list of identified projects.

Table 3 – Summary of Hot Spot Locations (Pedestrian Needs Analysis)

Location	Rationale
32 Street (Milligan Dr to Crystal Shores Rd)	32 Street is an arterial road. There is also a higher density of youth along this corridor. The corridor already has sidewalks on both sides but there is an opportunity to provide a higher quality active transportation facility to accommodate all ages and abilities.
Milligan Drive (Drake Landing Hts to Ranchers Meadows)	Milligan Drive is a collector road. There are multiple connections to existing pathways in this location. There is also a higher density of youth in this location. Even though the area scored high in pedestrian need, it already has separated sidewalks, which are a high-quality pedestrian facility. Therefore, this part of Milligan Drive already provides pedestrian facilities for all ages and abilities.
Northridge Drive (Elizabeth St to Woodhaven Dr)	Northridge Drive is an arterial road. This location also has multiple connections to existing pathways along with proximity to several commercial destinations and parks. The area also sees a higher number of transit pick-up and drop-offs, which indicates that there is demand for transit. Even though the area scored high in pedestrian need, it already has separated sidewalks and easy access to existing pathways.
Woodgate Road (Woodhaven Dr to Community Way)	Woodgate Road is a collector road. It also has connections to multiple key destinations (e.g., parks, commercial amenities), connects to existing pathways, and sees a higher number of transit pick-up and drop-offs. Lastly, individual median income is lower in this area compared to other locations in the town. Even though there are sidewalks on both sides of Woodgate Road, the corridor is less comfortable for people cycling and presents an opportunity for a higher quality active transportation facility that can serve multiple users.
Westmount Road (Westland St to Southridge Dr)	Even though Westmount Road is a local road and therefore has a lower number of motor vehicles, this location has a high number of commercial destinations, has a higher youth and senior density, and has sidewalks where there are some defects and deficiencies. Lastly, there is also a school in proximity to this location (Westmount School). Even though the area scored high in pedestrian need, there are already sidewalks on both sides of the road and there are other locations in the town that lack pedestrian facilities.

Location	Rationale
Southridge Drive (Westland St to Hwy 7)	Southridge Drive is an arterial road. There are multiple commercial destinations in this location. There are also some defects and deficiencies in the sidewalk infrastructure. Lastly, there are a higher number of transit pick-up and drop-offs in this location. Even though the area scored high in pedestrian need, there are already separated sidewalks on both sides of the road and there are other locations in the town that lack pedestrian facilities. That said, the Westmount Road / Southridge Drive intersection could be improved for pedestrians through accessibility and safety enhancements.
Cimarron Trail (Cimarron Park Pl to Cimarron Blvd)	Cimarron Trail is a collector road. This location has a comparatively higher density of youth, a higher number of transit pick-up and drop-offs, and is in proximity two schools (St. John Paul II Collegiate and St. Mary's School). It is also in proximity to existing pathways. Even though the area scored high in pedestrian need, there are already separated sidewalks on both sides of the road and crosswalks throughout the corridor. There is an opportunity, however, to provide cycling facilities in this location.
Cimarron Drive (Cimarron Springs Rd to Cimarron Est)	Cimarron Drive is a collector road. This location has a comparatively higher density of youth, is in proximity to a school (St. Mary's School), and provides easy access to multiple existing pathways. Even though the area scored high in pedestrian need, there are already separated sidewalks on both sides of the road and crosswalks throughout the corridor. There is an opportunity, however, to provide cycling facilities in this location.

Map 2 - Pedestrian Needs Analysis



Map 3 illustrates the results for the cycling needs analysis and **Table 4** includes a discussion of the hot spot locations (i.e., those with highest need). Note, the table only includes the locations that scored highest in cycling need.

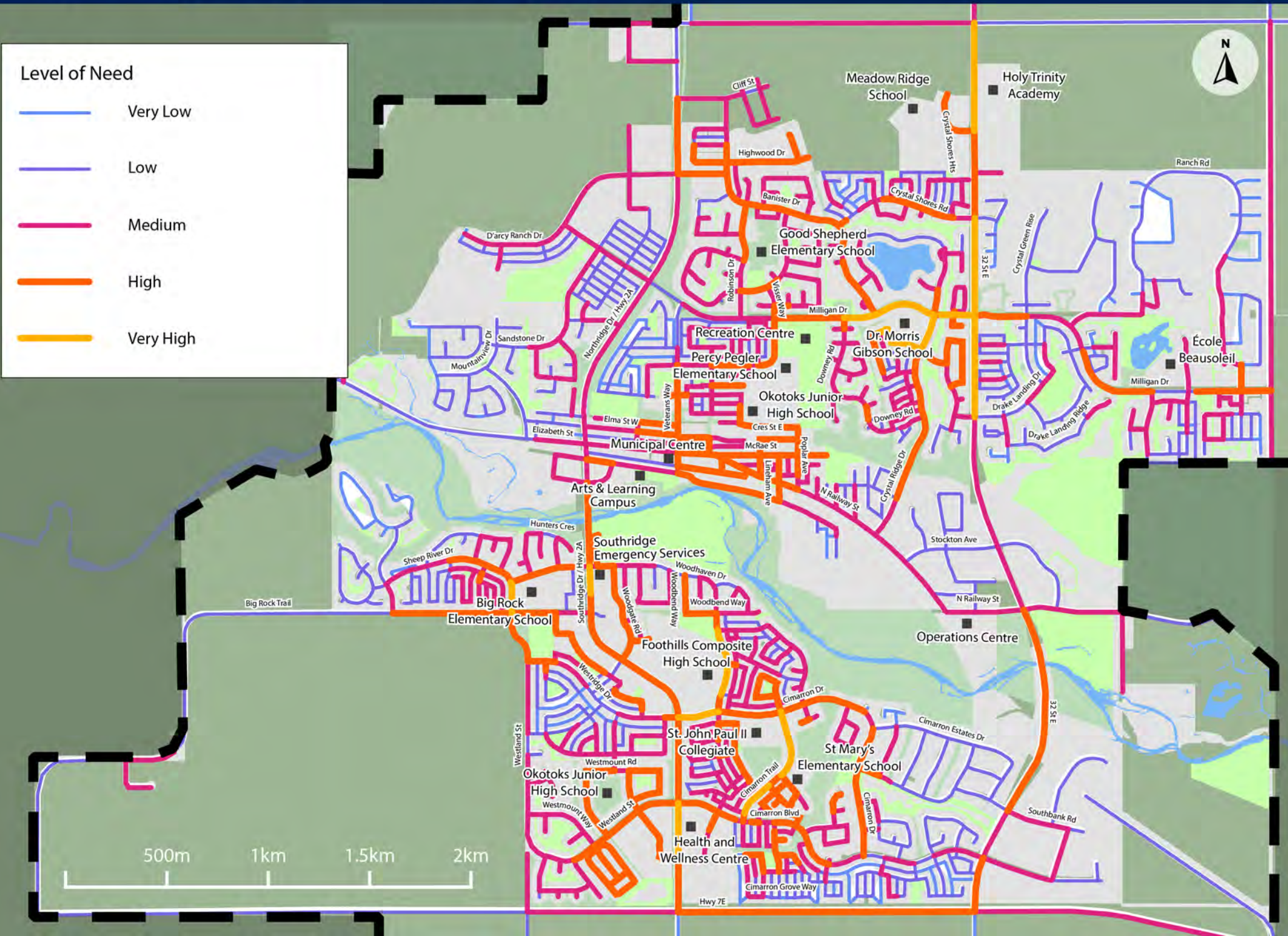
Table 4 – Summary of Hot Spot Locations (Cycling Needs Analysis)

Location	Rationale
32 Street (Drake Landing Dr to Crystal Shores Rd)	32 Street is an arterial road. There is also a higher density of youth and seniors along this corridor. There is also relatively high Strava activity along 32 Street. The corridor already has sidewalks on both sides that are accessible for different active transportation users (including those walking, cycling, and rolling). Given that it has high pedestrian and cycling need, there is an opportunity to provide a higher quality active transportation facility to accommodate all ages and abilities.
32 Street (338 Ave to Chinook Arch Wy)	32 Street is an arterial road. This part of 32 Street lacks active transportation facilities as there is only a paved shoulder available. The location is also in proximity to two schools (Meadow Ridge School and Holy Trinity Academy).
Milligan Drive (32 St to Downey Rd)	Milligan Drive is a collector road. There is a higher density of youth in this location along with a school (Dr. Morris Gibson School) and key destinations including parks and a recreation centre. There are sidewalks on both sides of the street, but there is an opportunity to provide a higher quality active transportation facility to accommodate all ages and abilities.
Crystal Ridge Drive (Milligan Dr to Crystal Ridge Link)	Crystal Ridge Drive is a collector road. There is also a higher density of youth and seniors along this corridor. There is also relatively high Strava activity along the Crystal Ridge Drive corridor. There are currently no cycling facilities along this corridor.
Crystal Ridge Crescent	Similar to Crystal Ridge Drive, this location has a school (Dr. Morris Gibson School) and a higher density of youth and seniors along this corridor. There are currently no cycling facilities along Crystal Ridge Crescent.
Southridge Drive (Woodhaven Dr to Village Ave)	Southridge Drive is an arterial road. There are multiple commercial destinations in this location. There is also relatively high Strata activity in this location. Even though the area scored high in cycling need, the provision of a cycling facility along the highway may not attract people cycling as it is a busier vehicle corridor.
Sheep River Drive (Big Rock Trail to Hunters Gate)	Sheep River Drive, while a local road, is in proximity to a school, has relatively high Strata activity, and has a higher density of youth and seniors in this location. It is also in proximity to several key destinations / commercial amenities along Southridge Drive. There are currently no cycling facilities on Sheep River Drive, which presents an opportunity to connect residents of that neighbourhood to Big Rock School, Big Rock Trail, and to the Sheep River Pathway.

Location	Rationale
Woodhaven Drive (Woodbend Way to Cimarron Dr)	Woodhaven Drive is a collector road. In addition to being a hot spot in the cycling needs analysis, it also scored medium/high in the pedestrian needs analysis. Woodhaven Drive connects to a school (Foothills Composite High School), is within proximity to key destinations including parks and several commercial/recreational destinations. There is also relatively high Strava activity for some parts of Woodhaven Drive. Lastly, individual median income is lower in this area compared to other locations in the Town. There are currently sidewalks on both sides of Woodhaven Drive. However, there is no cycling facility. As Woodhaven Drive scored higher in both the pedestrian and cycling needs analysis, there is an opportunity to provide a high-quality active transportation facility for all ages and abilities.
Cimarron Drive (Southridge Dr to Woodhaven Dr)	Cimarron Drive is a collector road. This location has a comparatively higher density of youth and seniors and is in proximity to a school (Foothills Composite High School), and key destinations along Southridge Drive. There are currently no cycling facilities along Cimarron Drive.
Southridge Drive (Westland St to Hwy 7)	Southridge Drive is an arterial road. There are multiple commercial destinations in this location. Even though the area scored high in cycling need, the provision of a cycling facility along the highway may not attract people cycling as it is a busier vehicle corridor.
Cimarron Trail (Cimarron Park Pl to Cimarron Blvd)	Cimarron Trail is a collector road. This location has a comparatively higher density of youth and is in proximity two schools (St. John Paul II Collegiate and St. Mary's School). There are currently no cycling facilities in this location.

Level of Need

	Very Low
	Low
	Medium
	High
	Very High



3.3 Facility Types

Using the results from the needs analysis, this section identifies the appropriate active transportation facilities for the network. A description of each facility type is provided with more detailed design guidance found in **Section 3.5**.

There are four active transportation facility types that are recommended for Okotoks.

Sidewalks



Example of a separated sidewalk on Mountainview Drive.

Definition:

A sidewalk is a facility dedicated to people walking and rolling and is adjacent to the roadway. It consists of ample space for pedestrian movement and can provide amenities and utilities if separated from the roadway.

Types:

Separated sidewalks have a 'furnishing zone' or boulevard that separates the sidewalk from the roadway to act as a buffer from traffic. This type of sidewalk is the recommended priority (when applicable) to provide the most safety and comfort for pedestrians.

Applicability:

A separated sidewalk is preferred when at least one of the following conditions are met: (1) motor vehicle speeds exceed 50 km/h (2) located near a school zone (3) the facility is located nearby commercial, mixed-use and other key community destinations that have the potential to generate significant pedestrian traffic.

Multi-use Pathways



Example of a user-separated multi-use path in Canmore, AB.

Definition:

Multi-use pathways (MUPs) are off-street pathways that are separated from motor vehicle traffic and can be used by any active transportation user: people walking, rolling and cycling. MUPs typically accommodate bi-directional travel and are commonly shared spaces for all users. Separation between people walking/rolling and people cycling may be considered if there is a high volume of users and/or there have been conflicts between active transportation user groups. In this case, proper markings denoting the intended users are strongly recommended.

Applicability:

Typically, when vehicle volumes on a roadway range from 2,500 to 4,000 per day and/or vehicle speeds exceed 50 km/h.

Protected Bike Lanes



*Example of a protected bike lane in Calgary, AB using rubber curbs and flexible delineators.
Credit: Bike Calgary.*

Definition:

A designated lane for people cycling and other active transportation users that is physically separated from motor vehicle traffic and people walking and rolling.

Types:

Protected bike lanes can either be uni-directional (i.e., one-way) or bi-directional (i.e., two-way). Typical types of separation that protect the bike lane from motor vehicle traffic include concrete barriers, raised medians, and planter boxes. A combination of these treatments can also be used, each having their own benefits and drawbacks. When providing vertical separation, the width of the bike lane should be maximized. Continuous barriers offering physical protection are recommended on roads with vehicle speeds greater than 50 km/h. Quick-build options include flexible delineators, concrete or plastic jersey barriers, rubber curbs, armadillos, and precast curbs.

Applicability:

Typically, when vehicle volumes exceed 4,000 per day and/or vehicle speeds exceed 50 km/h.

Neighbourhood Bikeways



Example of a neighbourhood bikeway in Calgary, AB. Credit: Tom Thivener.

Definition:

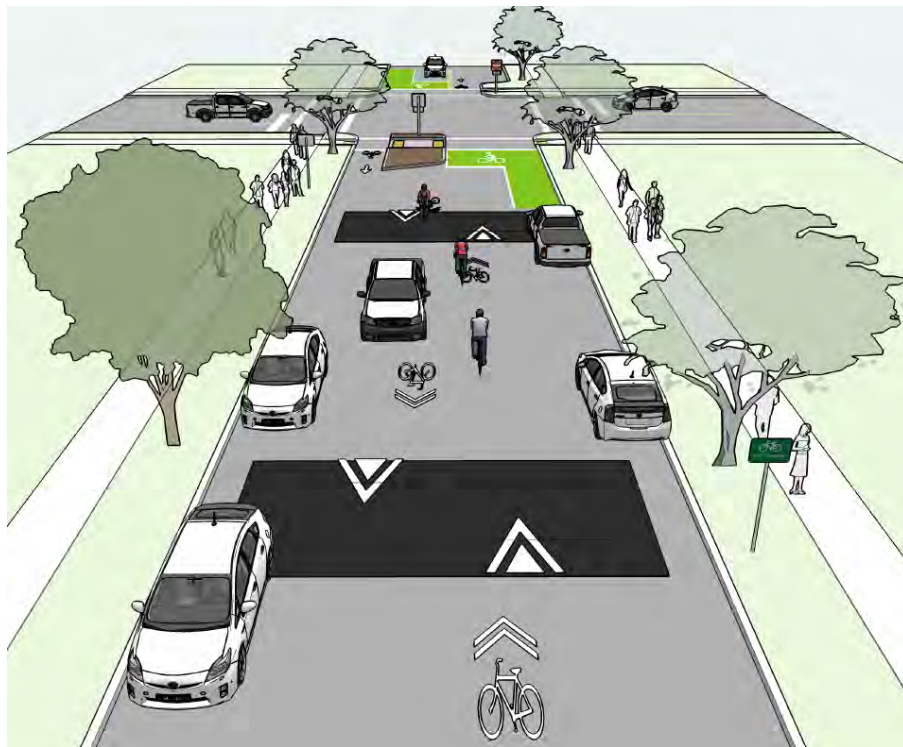
Neighbourhood bikeways are intended to share the roadway safely between motor vehicles and people cycling. They are most commonly on roads that have parking on both sides, which helps narrow the road and provide a slower speed environment. They are typically signed with a 30 km/h posted speed limit.

Types:

Neighbourhood bikeways typically have different levels of treatment, from basic requirements (signage, pavement markings) to more advanced including traffic calming measures and traffic diversion, depending on vehicle volumes and speed limits.

Applicability:

Typically, when vehicle volumes are under 1,000 per day and/or vehicle speeds are under 30 km/h. Depending on the context, neighbourhood bikeways can also be found on roads with vehicle volumes under 2,500 per day and/or vehicle speeds of up to 50 km/h. However, roads with higher levels of traffic require higher levels of treatments to make them more comfortable for all ages and abilities (e.g., traffic calming, diversion, etc.).



Conceptual illustrations of neighbourhood bikeways. Image (top) shows typical treatments like pavement markings and signage. It also shows speed humps, which should be considered on roads with higher traffic volumes. Image (bottom) illustrates a neighbourhood bikeway at an intersection with a traffic circle. Credit: Alta Planning + Design

3.4 Identified Projects

Based on the needs analysis described in the previous section, and building on the Town's current active transportation planning, a network of over 30 future projects are shown in **Map 4**. **Tables 5-8** include a summary of each project by facility type. This section does not include the overall prioritization of each project; **Section 5.0** (Implementation Program) includes more details such as project evaluation, prioritization, project phasing, costing, and funding opportunities.



Milligan Drive is a busy vehicle corridor. Even though there are separated sidewalks on both sides of the road, there is an opportunity to provide a higher quality active transportation facility to formalize Milligan Drive as a critical east-west corridor in the active transportation network. A multi-use pathway is recommended.

Map 4 - Identified Projects

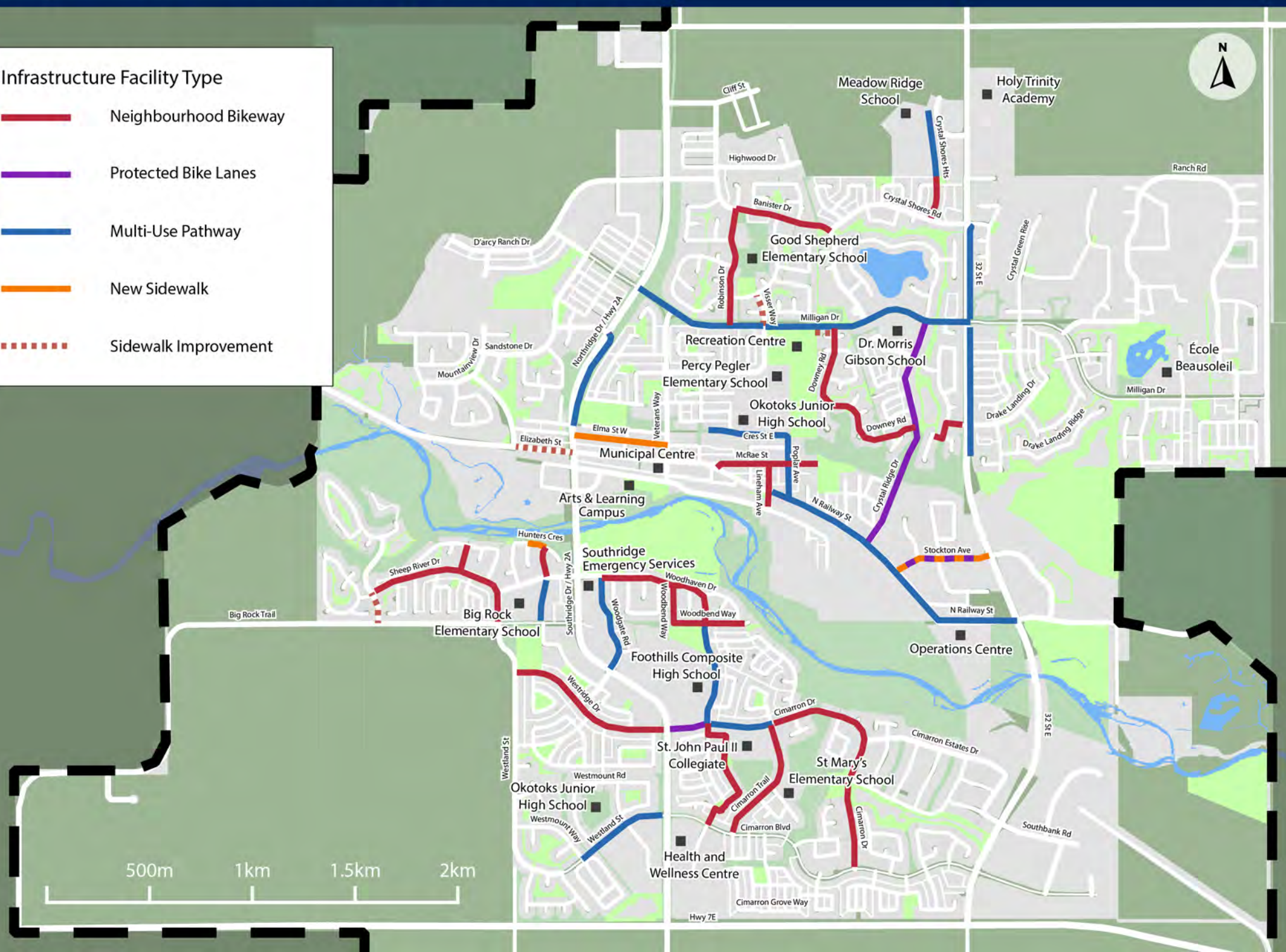


Table 5 – Summary of Recommended Multi-Use Pathway Facilities

Project Number & Location	Discussion
1A – 32 Street E (Crystal Shores Rd to Beatrice Wyndam Parkway pathway)	A multi-use pathway in this location would provide important north-south connectivity along 32 Street. It would connect residential areas to schools (e.g., Dr. Morris Gibson School) and to the existing pathway network. This would require upgrading the existing sidewalk on the east side of the road to a higher quality multi-use pathway.
1B – Milligan Drive from 32 St E to Okotoks Dr / Visser Way	A multi-use pathway in this location would provide important east-west connectivity along Milligan Drive with connections to a school (Dr. Morris Gibson School), a recreation centre, existing pathways, and to Northridge Drive.
1C – Milligan Drive from Visser Way to Northridge Dr	
1D – Cimarron Drive from Woodhaven Dr to Cimarron Trail	A multi-use pathway in this location would provide a critical connection to a school (St. John Paul II Collegiate) and to an existing pathway. It would also connect to the larger pathway network by adding a new cycling facility further east on Cimarron Drive. This would require upgrading the existing sidewalk on the east side of the road to a higher quality multi-use pathway.
1E – Woodhaven Drive from Woodbend Way to Cimarron Dr	A multi-use pathway in this location would provide a critical connection to a school (Foothills Composite High School) and to an existing pathway. It would also connect to the larger pathway network and provide connections to residential areas and to commercial and recreational destinations.
1F – Hemus Parkway Extension from Sandstone Gate to Elma Street	A multi-use pathway in this location would continue the existing pathway connection further south and in parallel to Northridge Drive. It would allow active transportation users to access the downtown more directly.
1G – Poplar Avenue / Cres St E from N Railway to Pacific Ave	A multi-use pathway in this location would provide an important north-south connection from two schools and to an existing pathway near North Railway Street. This would require upgrading the existing sidewalk on the west side of the road to a higher quality multi-use pathway.
1H – North Railway Street from Lineham Ave to 32 St E	A multi-use pathway in this location would serve as a “rib” in the network, providing an east-west connection across the Town. It would bring active transportation users closer to the downtown and to nearby destinations surrounding the downtown. Further, it would provide a connection to several destinations along 32 Street E and to many recreational amenities in that area. <i>Note: based on the location of this improvement, and the length of the facility, the Town could consider providing bi-directional on-street protected bike lanes as a quick-build / temporary facility. This would be a more cost-effective approach in the interim before committing to a more complex and expensive off-street multi-use pathway.</i>
1I – Woodgate Road from Woodhaven Dr to Southridge Dr	A multi-use pathway in this location would provide access to commercial destinations along this corridor. It would also connect residential areas to the existing pathway just south of Hughes Park and to the pathway north of Woodhaven

Project Number & Location	Discussion
	Drive. There are sidewalks on both sides of Woodgate Road. The Town would need to determine which side to upgrade to a higher quality multi-use pathway. <i>Note: based on the location of this improvement, and the space available on-street, the Town could consider providing bi-directional on-street protected bike lanes as a quick-build / temporary facility. This would be a more cost-effective approach in the interim before committing to a more complex and expensive off-street multi-use pathway.</i>
1J – Big Rock School Pathway	The Big Rock School Pathway is already identified in the Town's Transportation Master Plan. A multi-use pathway in this location would provide a more direct connection to the school (Big Rock School) in addition to the Hunters Glen neighbourhood.
1K – Westland Street from Westmount Cir to Southridge Dr	A multi-use pathway in this location would provide a safer connection to Westmount School in addition to direct access to the Tucker Parkway.
1L – Meadow Ridge School Pathway Connection	A multi-use pathway in this location would provide a more direction connection from the Crystal Shores neighbourhood to Meadow Ridge School.

Table 6 includes a summary of the recommended sidewalk facilities.

Table 6 – Summary of Recommended Sidewalk Facilities

Project / Location	Discussion
2A – Milligan Drive (south side), west Downey Rd	The existing sidewalk in this location is deficient and is inaccessible for those with mobility impairments.
2B – Visser Way from Milligan Dr to Waldron Ave	The existing sidewalk on the east side should be widened and the curb ramp should be redesigned to meet accessibility needs. The crosswalk should also be relocated to align with the existing pathway on the north side of Waldron Avenue.
2C – Stockton Avenue from N Railway St to 32 St E	There is no sidewalk on the south side of the road where multiple businesses and commercial amenities are found. Further, there is no existing cycling facility. Protected bike lanes and a sidewalk on the south side would provide a safer and more accessible connection for those using active modes on Stockton Avenue.
2D – Elma Street from Northridge Dr to Veterans Way	There are several commercial destinations on the north side of the road where there is not existing sidewalk. A non-separated sidewalk is recommended to improve safety and accessibility for users.
2E – Elizabeth Street from Mountainview Gate to Northridge Dr	The existing sidewalk (north side) on Elizabeth Street could be widened to provide greater separation between those walking / rolling and motor vehicles.
2F – Sheep River Boulevard from Big Rock Trail to Sheep River Gate	The existing sidewalk (east side) is narrow compared to the facilities farther north on Sheep River Boulevard. A wider sidewalk would provide greater accessibility for people walking and rolling. Note: a neighbourhood bikeway is also recommended for this location so both facilities could be implemented at the same time.
2G – Hunters Crescent from Hunters Gate to Sheep River Pathway	Hunters Crescent has a sidewalk on the east side of the street. However, there is no sidewalk facility along the east-west segment of Hunters Crescent. A sidewalk connection is recommended in this location along with an accessible crossing to allow users to access the Sheep River Pathway.

Table 7 includes a summary of the recommended cycling facilities.

Table 7 – Summary of Recommended Cycling Facilities

Project / Location	Discussion
3A – Crystal Ridge Drive from N Railway St to Crystal Ridge Cres	Protected bicycle lanes are recommended along this corridor, which would provide a north-south connection to various destinations including Dr. Morris Gibson School, commercial amenities, the existing pathway network, and to North Railway Street.
3B – Cimarron Drive from Southridge Dr to Woodhaven Dr	Protected bicycle lanes are recommended for this segment of Cimarron Drive to provide a connection to both St. John Paul II Collegiate and Foothills Composite High School in addition to the larger Cimarron neighbourhood.
3C – Stockton Avenue from N Railway St to 32 St E	As discussed in Table 6 , both protected bike lanes and a new sidewalk are recommended for Stockton Avenue.

Table 8 includes a summary of the recommended neighbourhood bikeways.

Table 8 – Summary of Recommended Neighbourhood Bikeways

Project / Location	Discussion
4A – Crystal Ridge Gate from 32 St E to Crystal Ridge View	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4B – Downey Road from Milligan Dr to Crystal Ridge Dr	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4C – Cimarron Trail from Cimarron Dr to Cimarron Blvd	A level 2 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit). In addition, traffic calming is recommended as Cimarron Trail is a collector road. Traffic calming could include speed humps and temporary traffic calming curbs.
4D – Cimarron Drive from Cimarron Trail to Cimarron Blvd	A level 2 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit). In addition, traffic calming is recommended as Cimarron Drive is a collector road.
4E – Woodhaven Drive from Woodgate4 Road to Woodbend Way	A level 2 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit). In addition, traffic calming is recommended as Woodhaven Drive is a collector road.
4F – Cimarron Meadows Dr / Cimarron Meadows Way from Cimarron Dr to Cimarron Blvd	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).

Project / Location	Discussion
4G – Woodbend Way from Woodhaven Dr to Cimarron Parkway	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4H – Lineham Avenue from S Railway St to McRae St	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4I – McRae Street from N Railway St to end	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4J – Sheep River Boulevard from Big Rock Trail to Sheep River Gate	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4K – Sheep River Drive from Sheep River Blvd to Big Rock Trail	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4L – Sheep River Link from Sheep River Dr to Sheep River Cres	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4M – Westridge Drive from Westland St to Southridge Dr	A level 2 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit). In addition, traffic calming is recommended as Woodhaven Drive is a collector road.
4N – Banister Drive from Robinson Dr to Rowland Pathway	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).
4O – Robinson Drive from Milligan Dr to Banister Dr	A level 2 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit). In addition, traffic calming is recommended as Robinson Drive is a collector road.
4P – Crystal Shores Heights from Crystal Shores Rd to end	A level 1 neighbourhood bikeway is recommended (signage, pavement marking, and 30 km/h per hour posted speed limit).

3.5 Active Transportation Facility Design Guidance

Table 9 outlines high-level design guidance for each facility type. The guidelines provide the Town with a framework of key engineering considerations when moving forward with detailed design and implementation. The guidelines are intended to reflect community context and are based on current information and research, recognizing that best practices change and evolve over time. The Town could use the table below as a framework when designing and constructing the recommended facilities in this plan. However, there are contextual and site-specific factors that require different designs and therefore the Town will need to maximize professional judgment through the detailed design process.

Table 9 – Facility Design Guidance

Concrete Sidewalk	
Width:	Desirable – 1.8-3.0m Constrained – 1.5m
Surface Material:	Concrete or asphalt is the standard material used for sidewalks. Other materials include permeable concrete or porous unit pavers, which helps manage stormwater.
Separation Treatment / Width:	Separated sidewalk – 0.6m (constrained) to 2.0m (desirable). • 0.75m if parking is provided to allow for opening doors of parked vehicles • 0.9m for streetlight and utility poles • 1.5m for street trees • Larger width when vehicle speeds exceed 50 km/h and vehicle volumes exceed 4,000/day. Non-separated sidewalk – concrete curb
Multi-use Pathways	
Width:	Desirable – 4.0m Constrained – 3.0m
Street Buffer Zone:	Desirable – 2.0m (8.0m along a highway corridor) Constrained – 0.6m (2.0m along a highway corridor)
Surface Material:	Asphalt is preferred, which provides a smooth continuous surface that is accessible for all user groups. For some contexts, such as through parks and playgrounds, other materials could be considered such as compact aggregate, gravel, or paving stones.
Pavement Markings:	There are several pavement marking options for MUPs. For the Okotoks context, a simple pathway symbol marking is appropriate, which can supplement signage and enhance awareness of the shared-use function of the pathway. They should be used at

	pathway entrances and on the far side of crossings, and approximately every 50 to 100m along the pathway.
Signage:	Signage at the pathway entry to indicate that both people cycling and walking are permitted, and signage showing the restriction of motor vehicles. In some cases, the yield to pedestrian sign can be used, which indicates that people cycling are required to cross or share a facility used by a pedestrian and must yield to pedestrians.
Separation of Users:	Separating users on a multi-use pathway requires significant space and may not always be justified. Guidance on when separation is justified is limited in the industry. However, the BC Active Transportation Design Guide provides a ratio: for trails that are 4.0m in width and has more than 1,400 daily users with at least 20% of those users as pedestrians, then separation between pedestrian and bicycle pathways should be provided.
Protected Bike Lanes (Uni-directional / one-way)	
Width:	Desirable – 2.0m Constrained – 1.8m
Street Buffer Zone:	Desirable – 0.9m Constrained – 0.3-0.6m
Separation Treatment:	Flexible delineator posts, precast concrete curbs, extruded curbs, modular plastic curbs, landscaped boulevards.
Signage:	Reserved bicycle lane sign should be placed along protected bike lanes. The reserved bicycle lane ends sign should be placed where bike lanes end. Pedestrian prohibited signs can also be used.
Pavement Markings	Dedicated bicycle lanes may include the bicycle symbol and directional arrows every 50m (or every 18m on a facility adjacent to parked vehicles).

Neighbourhood Bikeways	
Level 1 Treatment:	Where are they appropriate? Roads with less than 1,000 vehicles per day with a posted speed limit of 30 km/h or less Which treatments are appropriate? These corridors only require pavement markings, signage, and a posted speed limit of 30 km/h.
Level 2 Treatment:	Where are they appropriate? Roads with less than 1,000 vehicles per day with a posted speed limit of 30-50 km/h or less Which treatments are appropriate? These corridors require pavement markings, signage, and a posted speed limit of 30 km/h. In some cases, traffic calming treatments (e.g., speed humps, chicanes, etc.) should be considered).
Level 3 Treatment:	Where are they appropriate? Roads with up to 2,500 vehicles per day with a posted speed limit of 30-50 km/h or less Which treatments are appropriate? These corridors require pavement markings, signage, and a posted speed limit of 30 km/h. In some cases, traffic calming treatments (e.g., speed humps, chicanes, etc.) should be considered) along with traffic diversion (either partial or full closures)

3.5.1 Quick-build Facilities

As the Town looks to design and implement its active transportation network, it will need to consider the specific materials required for each facility. **Table 9** above provides high-level direction on the design considerations, but the Town will need to ultimately determine whether it wants to install a more permanent or temporary facility. Multi-use pathways, for example, are typically more permanent in nature. However, protected bicycle lanes and neighbourhood bikeways can be implemented using a range of temporary (quick-build) materials.

Quick-build, also referred to as rapid implementation, refers to active transportation facilities that are temporary in nature. They include materials that are flexible, inexpensive, and allow for adjustments to be made after implementation. One of the most comprehensive design guides on this topic is TransLink's *Rapid Implementation Design Guide for Bikeways in Metro Vancouver*.³ The guide identifies three key elements that define a quick-build (rapid implementation) project, as follows:

- **Fast** – quick-build projects can be implemented quickly. They often do not require significant capital construction, and therefore do not require time-consuming design and tendering processes. Often, these facilities can be installed by municipal crews.
- **Low Cost** – most of these projects make use of lower-cost materials such as flexible delineator posts, modular plastic curbs, pre-cast concrete curbs, and traffic calming curbs, for example.
- **Flexible** – the materials used for these projects are flexible and adjustable by their design. This allows a community to pilot a project and adjust as needed. This could include removal of the facility altogether or upgrading it from temporary to permanent based on feedback from users.

³ TransLink. (2022). Rapid Implementation Design Guide for Bikeways in Metro Vancouver. Available online at: https://www.translink.ca/-/media/translink/documents/cycling/regional-cycling-strategy/rapid_implementation_design_guide_for_bikeways_in_metro_vancouver.pdf



Examples of quick-build cycling facilities in Calgary. Top photo shows a neighbourhood bikeway with diverters and temporary traffic calming curbs to prioritize the road for people cycling. Bottom photo shows a protected bike lane with quick build materials including delineator posts and precast concrete curbs.

3.6 Intersection & Crossing Improvements

In addition to providing new facilities, the active transportation network will also require intersection and crossing improvements to meet the needs of all users. Those with mobility impairments, seniors, youth, and other vulnerable populations may be less likely to use active transportation modes in the absence of a safe, accessible, and connected network. The following outlines recommendations for both major intersections and minor intersection improvements + crossings. High-level improvements are identified, which will require more detailed engineering review in the implementation phases.

3.6.1 Major Intersections

Table 10 identifies the major intersection improvement locations and **Map 5** shows them spatially.

Table 10 – Summary of Major Intersection Improvement Locations

Improvement / Location	Discussion
Northridge Drive / Milligan Drive	• In line with the In-service road safety reviews that were completed for the Town in 2024, install multi-use crossing sign at the southeast and northeast legs along with cross-ride markings • Review curb ramps to ensure they meet accessibility guidance
Southridge Drive / Woodhaven Drive	• Install a leading pedestrian interval (LPI) signal phase for east-west movements • Review the grade on the curb ramp for the southwest corner
Southridge Drive / Westland Street	• Install double curb ramps for southwest and northwest corners to improve accessibility • Review the grade of the curb ramp for the northeast corner
Southridge Drive / Westmount Road	• Provide a crossing for pedestrians along the southern leg • Fix the curb ramp at the southwest corner
Milligan Drive / Crystal Ridge Drive	• Install a pedestrian refuge island to enhance safety for children crossing Milligan Drive accessing Dr. Morris Gibson School • Install pedestrian flashers to improve visibility of pedestrians



The southwest corner of Southridge Drive and Westmount Road where people walking / rolling are not permitted to cross using the south leg and where there is no existing curb ramp at the corner.

3.6.2 Minor Intersections + Crossings

Table 11 identifies the minor intersection improvement and crossing locations and **Map 5** shows them spatially.

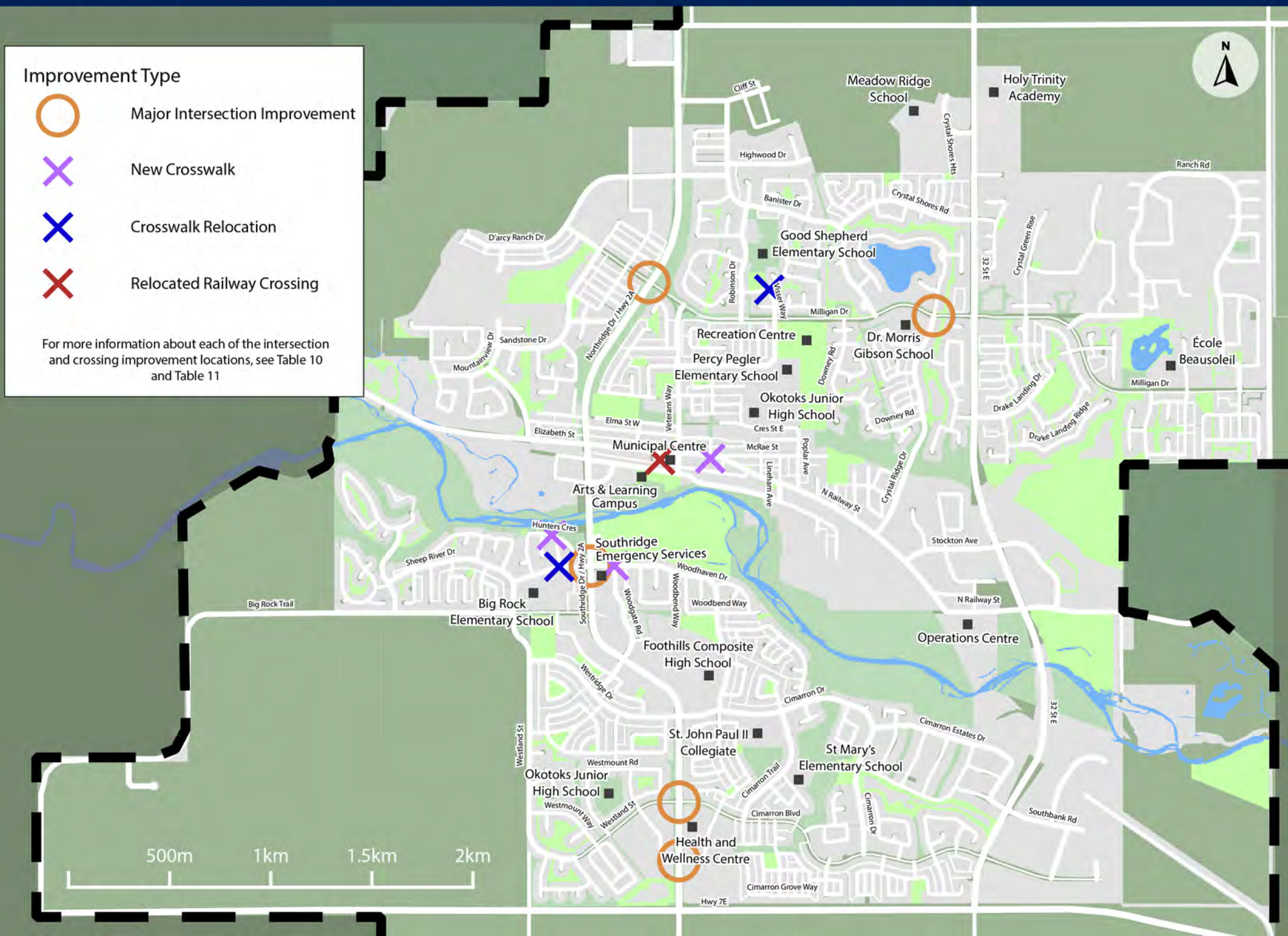
Table 11 – Summary of Minor Intersection Improvements + Crossing Locations

Improvement / Location	Discussion
CPKC Railway Crossing / Riverside Drive	- The railway crossing is narrow, has maze gates, and has an undesirable slope, which make it harder for people with mobility impairments, or those with strollers to cross - The crossing should be relocated closer to Okotoks Arts and Learning Campus and designed to meet a higher accessibility standard including removal of the maze gates and a less steep grade
CPKC Railway Crossing / Daggett Street & South Railway Street	- Add two crosswalks in this location to provide people walking / rolling with an opportunity to cross CPKC railway east of Veterans Way. A crosswalk is recommended for South Railway Street to provide a safe crossing from Heritage Parkway to the south side of the railway. A railway crossing is also recommended to provide a safe crossing to the downtown area and to provide a more direct connection to Clark Avenue - As part of this recommendation, the Town should also consider providing a pathway and/or sidewalk to connect the two recommended crosswalks. This will provide greater accessibility, especially for people with mobility impairments. These improvements could be completed as part of a larger active transportation capital project program in the downtown (see Section 3.7)
Woodgate Road / Woodhaven Drive	There is no existing north-south crosswalk at this intersection. With the recommendation to install a multi-use pathway, a crosswalk should also be installed to provide a safe crossing at this location and to allow active transportation users to connect to the existing pathway on the north side
Hunters Crescent / Sheep River Pathway	As part of the recommendation to improve the existing sidewalk and install a neighbourhood bikeway, a new crossing is recommended on Hunters Crescent to connect to the Sheep River Pathway
Hunters Gate / Hunters Crescent	Add a new crosswalk to the eastern leg of intersection to align with the recommended multi-use pathway for Big Rock School and to connect with the existing crosswalk on Hunters Crescent. The crosswalk at the western leg of the intersection could be retained
Waldron Avenue / Visser Way	Relocate existing crosswalk to align with pathway and add a curb ramp at the southeast corner



The existing CPKC railway crossing (at Riverside Drive) is problematic for pedestrian crossings. It is narrow, has maze gates, and steep slope, making it challenging for those using mobility devices (e.g., wheelchairs, strollers) to navigate the crossing.

Map 5 - Intersections & Crossing Improvements



3.6.3 Intersection & Crossing Design Guidance

Municipalities around North America are implementing a range of treatments at intersection and crossing locations to improve accessibility, reduce conflicts, and provide greater clarity on who has the right-of-way. These improvements have been made in response to best practices and industry guidance that has evolved over the last 10 years based on feedback from active transportation users and academic research. The following outlines different treatments that should be considered as part of implementing the recommended active transportation facilities and intersection / crossing improvements.



Credit: District of Saanich, BC



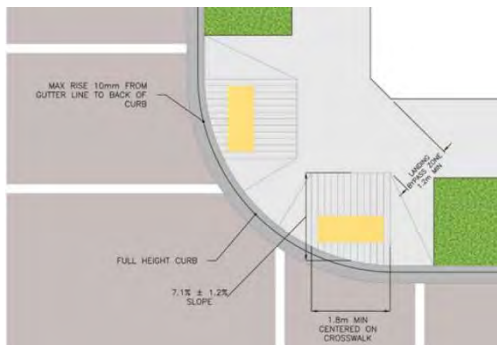
Image credit: City of Saskatoon

Leading Pedestrian Interval

A Leading Pedestrian Interval (LPI) typically gives pedestrians a 3–7 second head start when entering an intersection with a corresponding green signal in the same direction of travel. Pedestrians can better establish their presence in the crosswalk before vehicles have priority to turn right or left. There are many benefits associated with LPI including increased visibility of crossing pedestrians and reduced conflicts between pedestrians and vehicles, for example.

Accessible Pedestrian Signal

An accessible pedestrian signal allows pedestrians to activate the signal by waving their hand in front of the pushbutton or by pressing the button. They provide auditory, visual, and vibrotactile information to persons who are blind, or who have low vision, so they are aware of when to cross at a signalized intersection.



Credit: BC Active Transportation Design Guide

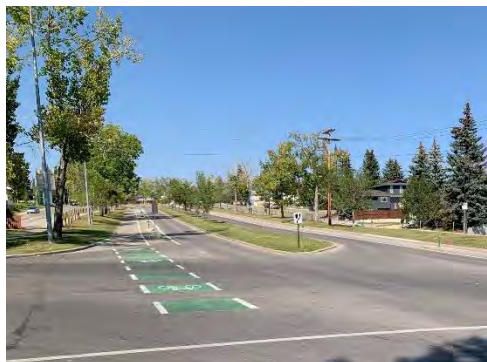
Curb Ramps

Where feasible, best practices recommended the installation of double curb ramps. Double curb ramps help to provide full universal access by landing pedestrians directly in the crossing area and in the desired direction of travel, rather than entering the road at an angle and having to reorient themselves. This is especially important for pedestrians using mobility devices and who are visually impaired.



Tactile Walking Surface Indicators

Tactile Walking Surface Indicators (TWSI), which are common across the Town of Okotoks, provide universal access, especially for visually impaired persons. The Town should continue to install TWSIs at the base of curb ramps. TWSIs should extend the full width of the curb ramp and should start between 300 and 350 millimetres from the road face of the curb.



Conflict Zone Markings

They are intended to raise awareness of people cycling, but also make cycling movements more predictable. Green coloured pavement is typically used to indicate conflict zones. The application of green pavement markings should be reserved for specific areas where a conflict may occur or where the design guides people cycling through intersections or complex cycling facilities.

Credit: City of Calgary



Credit: Region of Durham

Cross-ride Markings

They are pavement markings used to indicate that people riding their bicycle have the right-of-way over turning motor vehicles (i.e., the person cycling does not need to dismount). Cross-ride markings are best used in environments where sightlines for both cyclists and motorists are appropriate and motor vehicles are expected to yield to oncoming cycling traffic. This could include stop or signal controlled crossings, driveways, lanes, or other crossings whereby motor vehicle traffic is legally required to stop before turning or entering the road.

3.7 Active Transportation Improvements in the Downtown

The downtown is a unique district that showcases Okotoks's culture and history, with a mix of uses that support business success and a vibrant public realm for residents and visitors alike. The downtown and river valley are connected through a robust multi-modal transportation network and recreation path system that creates a cohesive community hub. As the Town continues to develop its active transportation network, there will be opportunities to make specific improvements in and surrounding the downtown. Specifically, there are challenges within the downtown that can be addressed through new capital projects, maintenance work, or a combination of both.

Although the ATIP does not include recommendations on when and how to address some of the specific downtown accessibility and active transportation challenges, it highlights key issues to aid prioritization and decision-making. There are several existing barriers to active transportation within the downtown including:

- **Disconnected Sidewalks:** Sidewalks that end unexpectedly, disrupting connectivity. Examples are found on the east side of Elk Avenue near Elizabeth Street and the south side of North Railway Street west of Daggett Street.
- **Park Connections:** Gaps in the connections from North Railway Street sidewalks, Lineham Avenue, and the river valley pathway system to Pisttoo Park.
- **Inconsistent Sidewalks:** Sidewalks with misaligned sections or obstacles that create sharp changes in direction, elevation, or slope. Examples include the sidewalk in front of the Okotoks Museum (49 N Railway Street), uneven paving stones around boulevard trees, and varied sidewalk widths near Stockton Block (14 McRae Street).
- **Accessibility (Curb) Ramps:** Missing tactile walking surface indicators on accessibility ramps to aid visually impaired individuals in navigating intersections or mid-block crossings. Some ramps are also absent or misaligned, failing to guide users in the intended direction across streets.
- **Damaged Paving Stones:** Stones that are chipped, crumbling, or uneven due to heavy wear and unexpected weathering. The Town has started a maintenance program to replace some of this concrete.

4.0 COMMUNITY ENGAGEMENT

4.1 Overview

Following the needs analysis and identification of the active transportation projects, the community was provided with an opportunity to share feedback. Specifically, the community was invited to share their ideas and concerns about the identified priority projects to improve the Town's active transportation network's safety, accessibility and connectivity. The purpose of the engagement was to understand the public's priorities for active transportation and to provide the community with a comprehensive understanding of what active transportation entails.

The following sections provide highlights from the community engagement process. For a more detailed summary, please see the *Okotoks Active Transportation Implementation Plan What We Heard* report.



4.2 What Was Done

The community was invited to engage in the ATIP process through the following in-person and virtual activities:

Public Open House

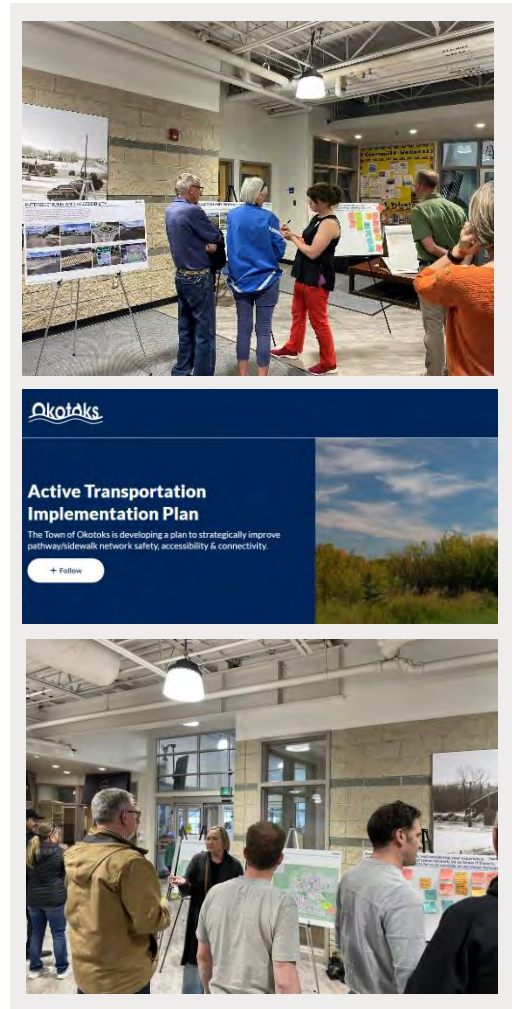
On April 24, 2024, a public Open House was held at the Okotoks Recreation Centre with approximately 105 attendees. Participants had the opportunity to explore the identified projects with the project team, share their ideas, and identify other areas to consider for improvements. The Open House attendees provided feedback on the current use and prospective future changes to the active transportation network.

Shape Our Town

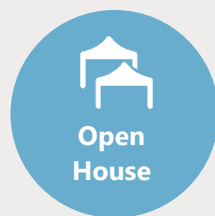
Available from April 24 to May 1, 2024, the Open House content was provided via the online platform Social Pinpoint. Participants were able to reflect on the engagement questions and provide their feedback virtually to contribute to the process. The online engagement received a total of 28 responses.

Project Webpage

A project-specific webpage for the ATIP was hosted within the Shape Our Town platform. Project details, updates and engagement opportunities were shared using this platform, where 1,085 visits to the website occurred between April 11 and May 17, 2024. The Town also used its online presence via social media to promote opportunities to engage in the ATIP process.



By the Numbers:



105 attendees



28 responses



1,085 visitors

4.3 What We Learned

A high-level summary is provided below of what was heard in the first phase of engagement. For a more in-depth report of the engagement results, please refer to the *Okotoks Active Transportation Implementation Plan What We Heard Report*.

Common Themes:

- Residents most commonly use the active transportation network north of the river
- Sidewalk infrastructure requires more maintenance and development
- New bike infrastructure is needed including on-road facilities and bicycle parking at key destinations
- The trail and pathway network is great but requires improvements at key locations
- Addressing pedestrian safety and accessibility cannot be forgotten

4.3.1 Project Locations

Participants identified specific project locations that are important to the community, summarized below. This list below is not complete; for the complete list see the *Okotoks Active Transportation Implementation Plan What We Heard Report*

Cycling Facilities:

- Crystal Ridge Drive
- Connecting 48 Street to 32 Street and 338 Avenue
- Southridge / 32 Street south of Cimarron

Pathways / Trails:

- Cimarron Estates: paving gravel trails
- Cassie's Ravine to Ardiel Drive: pathway ends abruptly and requires lighting
- Elizabeth St. to Milligan Dr: Pathways on both sides require improvements.

Sidewalks:

- Concerns with proposed sidewalk on Elma Street
- Desire to see improvements at Elizabeth Street, Tower Hill, and Big Rock Trail

Crosswalks:

- Improved crossings for Dr. Morris Gibson School and Elma Street / Northridge Road intersection

5.0 IMPLEMENTATION PROGRAM

The implementation program provides a detailed roadmap outlining which projects should be pursued first. It also includes details on project phasing and costing. In addition, this section includes a monitoring and evaluation framework to help the Town track how well—and how quickly—it is developing its active transportation network and meeting the goals of this plan.

5.1 Project Evaluation

As outlined in **Section 3.4**, over 35 active transportation facilities are recommended in this plan. However, not all of them need to be implemented at once as some provide broader community benefits and therefore could be implemented earlier. This section provides a summary of the project evaluation and prioritization of the active transportation facilities. **Table 12** below summarizes the project evaluation criteria.

Table 12 – Project Evaluation Criteria

Criteria	Definition
Existing Facility	There is no existing facility and/or the quality of the existing facility is poor either on the corridor or in proximity to the corridor. This indicates that there is not a safe all ages and abilities option for those who want to use active transportation.
Proximity to School	The proposed active transportation facility connects to elementary and/or high schools, providing safe travel options for children and their parents.
Connection to Trip Generator / Key Destination	Connection to a trip generator and/or key destination can facilitate more active transportation trips. Trip generators include parks, recreation / community centres, shopping malls / commercial centres, and multi-family residential buildings.
High-level Capital Cost	Active transportation facilities have a range of costs depending on their length, overall engineering complexity, and other factors. A high-level cost figure was estimated based on the facility type. It was completed as part of the project evaluation to help compare one project to another. More detailed costing is required during the detailed design stage.
Safety & Comfort	One of the biggest factors influencing the use of active modes of transportation is motor vehicle speed and volume. Busier roads in Okotoks including arterial and collectors may not be as comfortable and safe for people walking, rolling, and cycling due to their higher speeds and volumes. These roads often provide the most direct connection to a key destination. Therefore, active transportation facilities directly on or adjacent to busier roads should be given higher priority over local / residential roads.
Network Build-out	Filling in gaps between existing facilities and the Town's pathway network is critical for providing a connected and safe active transportation network.

Each criterion had a scoring classification where “1” indicated a low score and “5” indicated a high score. For example, for the criterion “Existing Facility”, a project scored a “1” if the road / corridor already has an active transportation facility but scored a “5” if there are no facilities available for most of the corridor and/or the road. For “Network Build-out”, a project scored a “1” if it does not connect to the existing pathway network but scored a “5” if it connects to one or more pathways”.

Given the different types of active transportation facilities recommended for the network, and their unique characteristics, the overall scoring varied considerably. For example, a neighbourhood bikeway generally has a much lower capital cost compared to a multi-use pathway and therefore scored high on the “high-level capital cost” criterion. Conversely, a neighbourhood bikeway scored lower on the “safety & comfort” criterion compared to a multi-use pathway as most neighbourhood bikeways are recommended for local / residential ones where traffic volumes and speeds are lower compared to collector and arterial roads.

Recognizing these differences in the project evaluation, three different scoring classifications were used to determine a low score from a high score:

- Multi-use Pathways
- Neighbourhood Bikeways
- General Projects (including everything else such as new sidewalks, sidewalk improvements, and protected bike lanes)

Tables 13-15 provide the ranking for each project.

Table 13 – Project Evaluation: Multi-use Pathways

Project Number & Location	Rank
1B – Milligan Drive from 32 St E to Okotoks Dr / Visser Way	High
1C – Milligan Drive from Visser Way to Northridge Dr	High
1E – Woodhaven Drive from Woodbend Way to Cimarron Dr	High
1F – Hemus Parkway Extension from Sandstone Gate to Elma Street	High
1G – Poplar Avenue / Cres St E from N Railway to Pacific Ave	High

Project Number & Location	Rank
1H – North Railway Street from Lineham Ave to 32 St E	High
1I – Woodgate Road from Woodhaven Dr to Southridge Dr	High
1J – Big Rock School Pathway	High
1A – 32 St E (Crystal Shores Rd to Beatrice Wyndam Parkway pathway)	Medium
1D – Cimarron Drive from Woodhaven Dr to Cimarron Trail	Medium
1K – Westland St from Westmount Cir to Southridge Dr	Medium
1L – Meadow Ridge School Pathway Connection	Low

Table 14 – Project Evaluation: Neighbourhood Bikeways

Project Number & Location	Rank
4B – Downey Road from Milligan Dr to Crystal Ridge Dr	High
4C – Cimarron Drive from Cimarron Trail to Cimarron Blvd	High
4E – Woodhaven Drive from Woodgate Rd to Woodbend Way	High
4F – Cimarron Meadows Dr / Cimarron Meadows Way from Cimarron Dr to Cimarron Blvd	High
4G – Woodbend Way from Woodhaven Dr to Cimarron Parkway	High
4H – Lineham Avenue from S Railway St to McRae St	High

Project Number & Location	Rank
4I – McRae St from N Railway St to end	High
4N – Banister Drive from Robinson Dr to Rowland Pathway	High
4O – Robinson Drive from Milligan Dr to Banister Dr	High
4J – Sheep River Drive from Sheep River Blvd to Big Rock Trail	Medium
4A – Crystal Ridge Gate from 32 St E to Crystal Ridge View	Medium
4L – Sheep River Link from Sheep River Dr to Sheep River Cres	Medium
4M – Westridge Drive from Westland St to Southridge Dr	Medium
4P – Crystal Shores Heights from Crystal Shores Rd to end	Medium

Table 15 – Project Evaluation: Other Projects

Project Number & Location	Rank
3A – Crystal Ridge Drive from N Railway St to Crystal Ridge Cres (<i>Protected Bike Lanes</i>)	High
2A – Milligan Drive (south side) just west Downey Rd (<i>Sidewalk Improvement</i>)	Medium
2B – Visser Way from Milligan Dr to Waldron Ave (<i>Sidewalk Improvement + Crosswalk</i>)	Medium
2D – Elma Street from Northridge Dr to Veterans Way (north side) (<i>Sidewalk</i>)	Medium
2G – Hunters Crescent from Hunters Gate to Sheep River Pathway (<i>Sidewalk Improvement + Crossing + Neighbourhood Bikeway</i>)	Medium

Project Number & Location	Rank
3B – Cimarron Drive from Southridge Dr to Woodhaven Dr (<i>Protected Bike Lanes</i>)	Medium
2C – Stockton Avenue from N Railway St to 32 St E (<i>Sidewalk + Protected Bike Lanes</i>)	Low
2E – Elizabeth Street from Mountainview Gate to Northridge Dr (<i>Sidewalk Improvement</i>)	Low
2F – Sheep River Boulevard from Big Rock Trail to Sheep River Gate (<i>Sidewalk Improvement + Neighbourhood Bikeway</i>)	Low

5.2 Project Phasing

Based on the project evaluation results, all the projects have been assigned a project timeline and are illustrated in **Map 6** and **7** (note: the maps only show short-term and medium-term priorities). The project timelines are as follows:

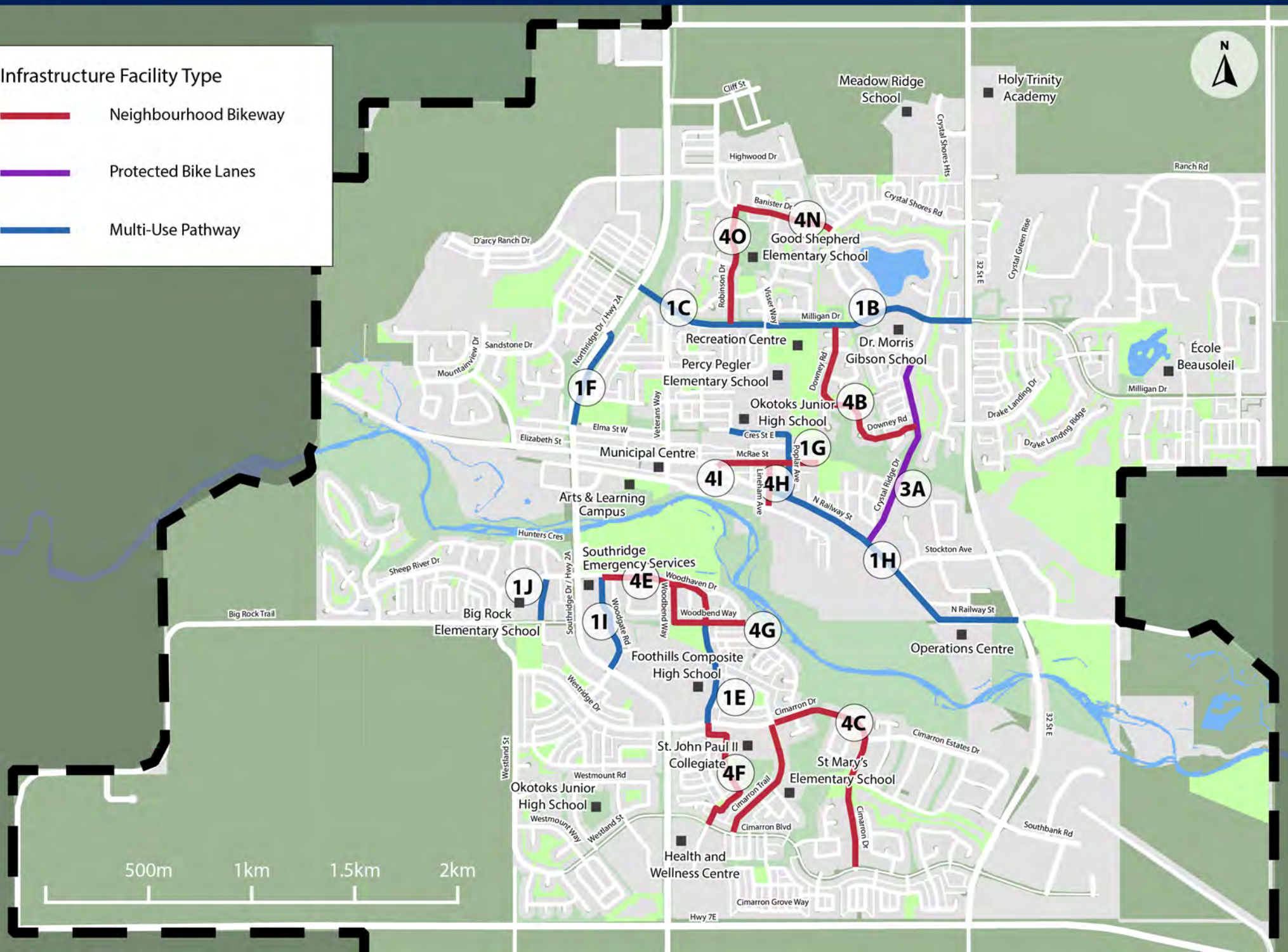
- Short-term priority (1-5 years)
- Medium-term priority (6-10 years)
- Long-term priority (10+ years)

Ultimately, the Town will need to determine which project(s) to pursue first. In practice, funding availability, overall budget, planning priorities, and utility work / road upgrades may dictate project priority. However, the project phasing is intended to provide the Town with guidance on overall priority based on the project evaluation that was completed as part of this plan.

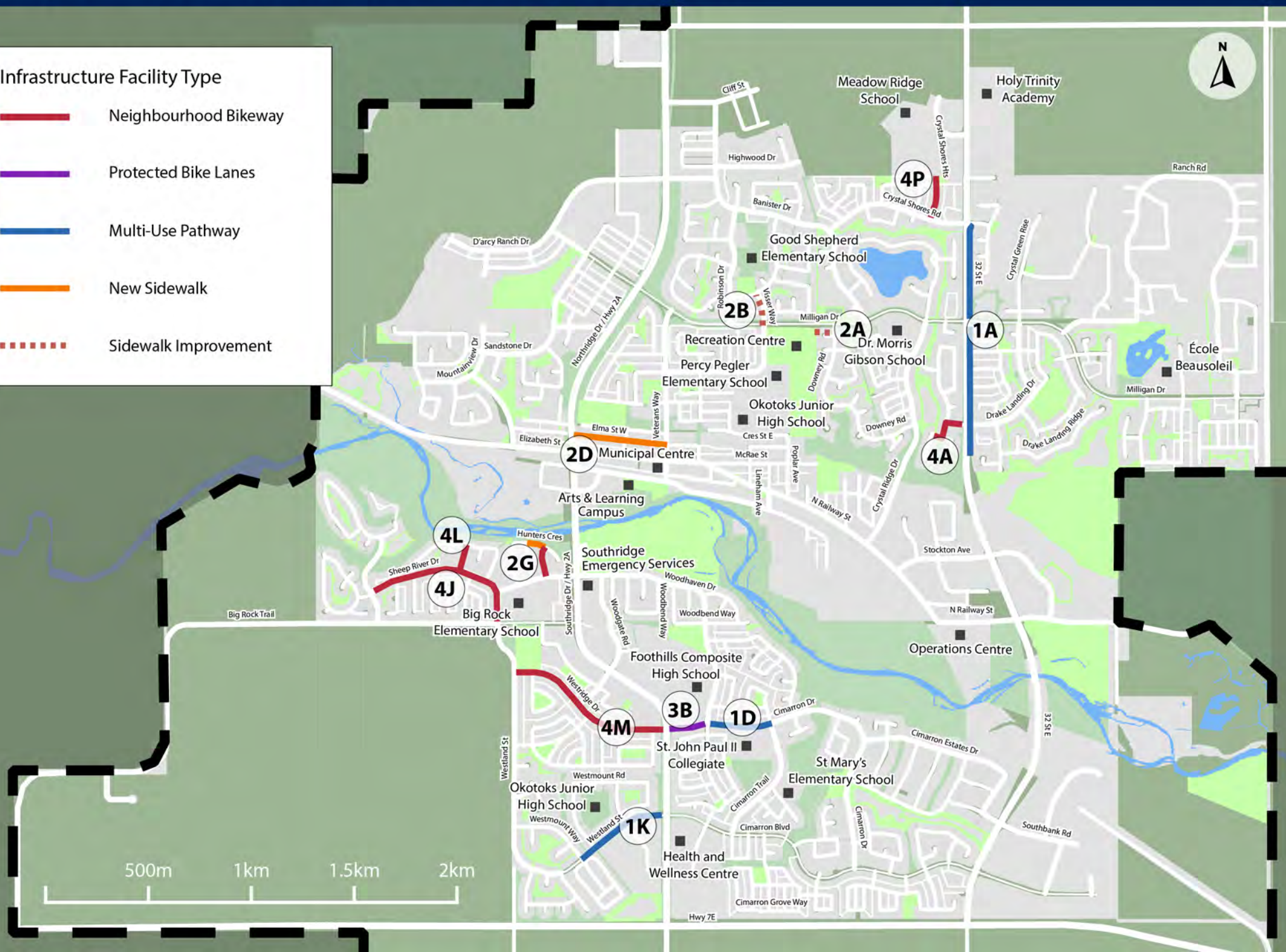
Map 6 - Short-Term Priority Projects

Infrastructure Facility Type

- Neighbourhood Bikeway
- Protected Bike Lanes
- Multi-Use Pathway



Map 7 - Medium-Term Priority Projects



5.3 Costing

An order of magnitude (Class D) cost estimate was completed for the highest priority (short-term) multi-use pathway projects. A few of the medium scoring multi-use pathway facilities were also included in the costing to assist the Town with planning and prioritization. Lastly, one sidewalk improvement project was included. **Table 16** shows the total estimated cost for the select priority facilities as **\$3,688,220**, or about \$368,000 per year over the next 10 years. Note, the costing for some the priority facilities includes costs for minor intersection and crossing improvements.

Note: the cost estimates are based on concept level information using unit rates for linear works and intersection improvements. Cost estimates include 20% engineering, 15% for inflation, and a 10% contingency. Costs do not include property and other significant impacts. The actual costs for implementation for each project could vary and will be confirmed through the detailed design stage and construction services and procurement.

Table 16 – Cost Estimate – Select Priority Facilities

Project Number & Location	Class D Cost Estimate (2024 \$)
1A – 32 St E (Crystal Shores Rd to Beatrice Wyndam Parkway pathway) (<i>Multi-use Pathway</i>)	\$339,900
1B – Milligan Drive from 32 St E to Okotoks Dr / Visser Way (<i>Multi-use Pathway</i>)	\$611,500
1C – Milligan Drive from Visser Way to Northridge Dr (<i>Multi-use Pathway</i>)	\$340,500
1E – Woodhaven Drive from Woodbend Way to Cimarron Dr (<i>Multi-use Pathway</i>)	\$307,000
1G – Poplar Avenue / Cres St E from N Railway to Pacific Ave (<i>Multi-use Pathway</i>)	\$417,300
1I – Woodgate Road from Woodhaven Dr to Southridge Dr (<i>Multi-use Pathway</i>)	\$326,000
1J – Big Rock School Pathway (<i>Multi-use Pathway</i>)	\$79,100
2B – Visser Way from Milligan Dr to Waldron Ave (<i>Sidewalk Improvement + Crosswalk</i>)	\$57,200
4C – Cimarron Trail from Cimarron Dr to Cimarron Blvd (<i>Level 2 Neighbourhood Bikeway</i>)	\$65,100
Total	\$3,688,220

5.4 Funding Opportunities

Active transportation infrastructure, while less costly than traditional road infrastructure, can still require significant capital investments. The estimated cost for the nine infrastructure projects identified in **Table 16** is **\$3,688,220**. These projects, in addition to the other recommended facilities outlined in the ATIP, can be paid for through a variety of funding sources including the municipal budget, the private development process, and/or through external funding via grants. The section outlines the different funding opportunities that are available.

5.4.1 Capital Planning

Town Council, through its annual municipal budget process and in consultation with Administration and the broader community, provides a capital and operating budget that reflects community priorities and needs. Council can allocate funds from general revenue, supplemented by grants or other sources, to support active transportation projects outlined in the ATIP. Funding may go toward specific capital projects to replace or create new infrastructure or as an operating expense to maintain and improve existing infrastructure.

Council's funding decisions surrounding active transportation recommendations will consider factors such as the efficiency of achieving desired outcomes and the alignment of existing work with new initiatives. The budget process remains flexible to adapt to changing needs and priorities while keeping the overall goals of this ATIP relevant to the community.

5.4.2 Private Development

The private land development approvals process also provides an opportunity to pay for active transportation facilities. Specifically, projects funded through developer contributions can include frontage improvements, off-site levies, or Community Amenity Contributions. The Town should continue to use the land development process to support project implementation, especially in areas and/or roads where an active transportation facility is recommended. Similarly, through the development permit process, the Town is able to secure financial contributions to pay for active transportation infrastructure improvements.

5.4.3 External Funding

There are several funding sources currently available at the provincial and federal levels of government that could help pay for future projects. A summary of each relevant funding sources is provided below.

- **The Government of Alberta Strategic Transportation Infrastructure Program (STIP)** – this program provides financial assistance to rural and smaller urban

municipalities for developing and maintaining key transportation infrastructure. STIP supports municipalities as they complete projects that improve accessibility and the movement of goods to market, increase opportunities for economic growth, and enhance safety and efficiency while extending the life of key transportation infrastructure. There are four components as part of the STIP; the most relevant component is called the “Local Municipal Initiative”. Under this component, municipalities can receive funding for up to 50% of the eligible costs of their project.

- **The Government of Canada Active Transportation Fund** – The ATIP was partially funded by National Active Transportation Fund under the “planning projects” stream. The other funding stream is “capital projects”, which involve new construction, enhancement of existing infrastructure, and/or improvements to design and safety features that encourage active transportation. The contributions are up to \$50 million with a maximum contribution rate between 40-100% depending on recipient and project location.
- **Federal Green Municipal Fund** – The Green Municipal Fund (GMF) is a program administered by the Federation of Canadian Municipalities intended to help Canadian communities expand their sustainability initiatives. Since 2000, the GMF has deployed \$900M in financing to 1,250+ sustainability initiatives.

The specific GMF initiative that is relevant to Okotoks is the “Capital Project Transportation Networks Commuting Options”, which is a combined loan and grant funding program for capital projects that reduce pollution by improving transportation systems and networks. This program covers several topics including bike paths, walking and cycling networks that promote accessibility and safety, and evaluation of active transportation infrastructure, among others.

5.5 Monitoring & Evaluation

The success of the Active Transportation Implementation Plan will be determined by how well the Town meets the goals outlined in this document. This means regular monitoring and evaluation of the ATIP to allow the Town to track its progress. Overall, it is recommended that the Town review the ATIP every 2 years as a “check-in” to see what has been implemented, and what is outstanding.

There are several progress indicators and measures that Okotoks could use to determine how well it is meeting the ATIP goals, shown in **Table 17**.

Table 17 – Measuring the Success of the ATIP

ATIP Goal	Metric	Data Source
Connectivity. To provide a more connected network that allows residents – and visitors – to use active transportation modes for all of their work and recreational trip purposes.	Walking, cycling, and transit mode share (%)	Statistics Canada
	Total length of the multi-use pathway network (m)	Town of Okotoks
	Total length of the neighbourhood bikeway network (m)	Town of Okotoks
	Total length of protected bicycle lanes (m)	Town of Okotoks
	Total length of new or improved sidewalks (m)	Town of Okotoks
	Walking and cycling volumes on the pathway network (#)	Town of Okotoks
All Ages and Abilities. To develop a more inclusive, accessible, and connected transportation network that works for people of all ages and abilities – an accessible network is one that works for everyone.	Number of collisions involving people walking and cycling (#)	Alberta Transportation, Okotoks RCMP
	Proportion of all collisions involving people walking and cycling (%)	Alberta Transportation, Okotoks RCMP
	Number of near misses between a person cycling and a motor vehicle	BikeMaps.org
	Number of new or upgraded curb ramps installed (#)	Town of Okotoks
	Number of accessible pedestrian signals installed (#)	Town of Okotoks
	Number of intersections with leading pedestrian signal (#)	Town of Okotoks
Active Transportation Culture. To support a culture of active transportation, providing choice, promoting a healthy community, and considering active transportation in all new transportation investments.	Number of schools that participate in an Active and Safe Routes to School Program.	Foothills School Division, Christ the Redeemer Catholic School District

6.0 SUPPORTIVE POLICIES & PROGRAMS

In addition to the provision of appropriate infrastructure, a high-quality active transportation network must be supported by policies and programs to help facilitate culture change and community uptake of utilizing active transportation facilities. This section provides recommendations on specific policy changes that are needed for the active transportation network.

6.1 Programs to Support Active Transportation

Develop an Active and Safe Routes to School Program

Active and Safe Routes to School programs intend to increase the number of students using active modes of travel to school to mitigate ongoing transportation and traffic safety issues around school areas, such as traffic congestion during drop-off/pick-up times, limited parking, car idling, distracted drivers, etc.

The City of Calgary, in partnership with Ever Active Schools, has a successful program that utilizes a School Travel Planning model to work with schools in developing a student-led action plan that is unique to each school's needs. The program is aligned with the Alberta school curriculum, where students are involved with implementing the specified safety improvements.

The Town can work with Ever Active Schools to develop a similar program with the Foothills and Christ the Redeemer school divisions that is tailored to each school's student and transportation needs to address traffic safety issues, promote active transportation modes, and shift travel behaviour from a young age.

Develop an Active Transportation Data Collection & Monitoring Program

Collecting data on the number of users on active transportation facilities in the town helps to determine baselines and progress of initiatives and measure their level of success. This information can be useful for identifying implementation priorities into the future.

The Town already collects some of this data with counters on the pathway network, which should continue to be maintained on the existing high-volume locations. There is opportunity to install more transportation counters for all of the high priority projects identified in the ATIP and formalize a monitoring program for new or priority facilities moving forward.

To further enhance the quality and usefulness of the program, data should be differentiated between active user types (people walking, rolling or cycling) for more effective reporting on transportation trends in the community.

Enhance Public Bicycle Parking

Bicycle parking that is convenient, safe and secure is a critical component of a successful active transportation network to support cycling as a desirable mode of transportation. A lack of appropriate bicycle parking has shown to be one of the main deterrents of using a bicycle daily.

Key guiding principles for providing public bicycle parking include:

- **Convenience:** Provision of bicycle parking in convenient and intuitive locations, adjacent to key destinations. Weather protection should be provided when possible to encourage all-weather cycling.
- **Safety and Security:** Bicycle parking should be securely installed to the pavement and be located in well-lit and highly-visible locations.
- **Functional:** Bicycle parking should consider different bicycle types, including cargo bicycles, bicycles with trailers, etc. Clearance from buildings, street furniture, vegetation, and other bicycle racks should be considered so that the design is intuitive and functional. Bicycle racks should be oriented so that bicycles are positioned parallel to the curb.
- **Accessible:** Bicycle parking should not become an obstacle to other users, including pedestrians and motor vehicles. Bicycle racks must be placed within the furnishing zone allowing for a wide pedestrian through zone so that they do not become a barrier to people using mobility aids, and must be easily detectable by visually impaired people. Bicycle parking spaces should be located close or within fire zones, loading zones, bus zones, passenger loading zones, accessible on-street parking spaces, or any other area where pedestrians will require frequent access.
- **Aesthetics:** Bicycle parking can match the design of the surrounding streetscape, however design functionality must be prioritized over aesthetic appeal.

In public spaces, facilities and services that are typically used for a short period of time (gymnasiums, libraries, health care facilities, civic services, etc.), short-term bike parking is appropriate. The recommended bike racks for short-term bike parking are 'Inverted U' and 'Post and Ring' types due to their universal application and sound design. The Town can work with businesses within commercial areas to encourage the recommended provision of short-term bike parking.



Example of a bike rack that meets best practices.
Credit: Habitat Systems

6.2 Policies, Bylaws & Administrative Procedures:

Explore User Separation on the Pathways

Okotoks has a robust pathway system that is well-used and cherished by the community. As the Town continues to develop its pathway network through implementation of this plan, there is a strong possibility that the pathway network will be even more popular with users. While this is generally a positive outcome, it may result in some user conflicts between those walking, cycling and rolling. There are three main factors that support the decision of whether to implement user separation:

1. **Right-of-way available** – if there is space is available, then separation should be provided between bicycle and other pathway users to help enhance safety and make the facility more comfortable for all users.
2. **Total volume of current and anticipated pathway users**
3. **Ratio of pedestrians to all daily pathway users**

Separation should be considered where there is a high percentage of pedestrians (more than 20% of pathway users) and total user volume greater than 33 persons per hour per metre of pathway width. Alternatively, a low percentage of pedestrians (less than 20% of users) and a high total user volume of more than 50 persons per hour per width should consider separation. For new pathways, land use and ridership volume on existing facilities should be considered for whether or not to separate users.

Establish a Speed Limit Policy

Vehicle speed limits are important to understand as they impact the overall comfortability of road users. Higher speed limits do not necessarily cause collisions, but they can result in more severe collisions, particularly with for more vulnerable road users. Lower speeds can give vehicle drivers more time and control, which improves road safety and lowers the overall impact if a collision were to occur. Therefore, understanding posted and operating speed limits – and where they differ in the street network – can help inform where certain active transportation facility types are most appropriate.

However, posting signage can have limited impact on changing driver behaviours. For instance, lowering the speed limit to 30 km/h on a road designed for 50 km/hr will not necessarily reduce the speed of vehicles on the road, but will increase the amount of vehicles travelling over the speed limit.

To mitigate this, the Town can develop a speed limit policy regarding the setting and changing of posted speed limits that provides guidance to staff to determine the appropriate speed limits based on road design and context. Even though all municipal roads within the Town are posted at 40 km/h (unless otherwise posted), the Town could strategize on where lower speed limits might be warranted. The TAC Canadian

Guidelines for Establishing Posted Speed Limits can provide guidance on evaluating corridors to determine posted speed limits for roads.

Update Snow Clearing Protocols to Support Active Transportation

To encourage the use of active transportation year-round, it is recommended that the Town update their snow clearing protocols. Currently, the Town's snow clearing policy includes pathways and sidewalks using a primary and secondary priority system – primary pathways are main pedestrian corridors and secondary pathways facilitate pedestrian movement from residential to commercial areas. Primary pathways receive snow clearing to promote pedestrian movement year-round.

It is recommended that the Town expands the primary snow clearing pathways to include the short-term priority projects identified in **Section 5.0**. These facilities should be cleared first after a snowfall and receive enough clearing (snow plowing and de-icing) to be able to see the bare pavement. This will allow for safe and more frequent use of active transportation in all seasons which can help encourage change in travel behaviour.

Update Bicycle Parking Standards in Land Use Bylaw

The existing bicycle parking standards outlined in the Okotoks Land Use Bylaw 17-21 are identified based on land use districts and do not specify requirements for short-term or long-term parking. This can be challenging to understand when determining the type of bicycle parking that should be provided for new developments.

It is recommended that the bicycle parking standards be updated to be based on land use, instead of per district, compiled in one section for easier comprehension and consistency in the provision of bicycle parking throughout the Town. Further, the standards should include clear requirements for short-term and long-term bicycle parking for each land use to ensure appropriate facilities are provided. The updated standards should be subject to a review of bicycle parking requirements in other representative municipalities that are comparable in size and applicable to the Okotoks context.

Conduct Regular Inspection of Active Transportation Facilities

In 2023, as part of preparing for the launch of the ATIP project, the Town undertook a comprehensive assessment of its existing active transportation facilities. This included, for example, a sidewalk inspection program to understand whether any facilities had deficiencies in their quality and condition. The data from the inspection was utilized for the needs analysis as part of the ATIP. However, the Town does not regularly conduct these inspections and has instead been taking a more ad hoc approach.

It is recommended that the Town continue to inspect its active transportation infrastructure, especially as new facilities are implemented. As part of a more formal inspection program, the Town will be able to not only assess existing infrastructure, but

also identify any gaps or larger network deficiencies (e.g., missing sidewalks and crossings, inaccessible curb ramps, etc.) while undertaking an inspection of a street, neighbourhood, or larger area. These deficiencies could be added to the Town's list of capital projects with some being more easily implementable (i.e., as low-hanging fruit) while others may take more financial resources.

6.3 Maintenance Considerations

The active transportation network will require regular maintenance to make it usable for all active transportation users, regardless of their age or ability. The following outlines some of the key considerations that the Town will need to include in its maintenance protocols and procedures.

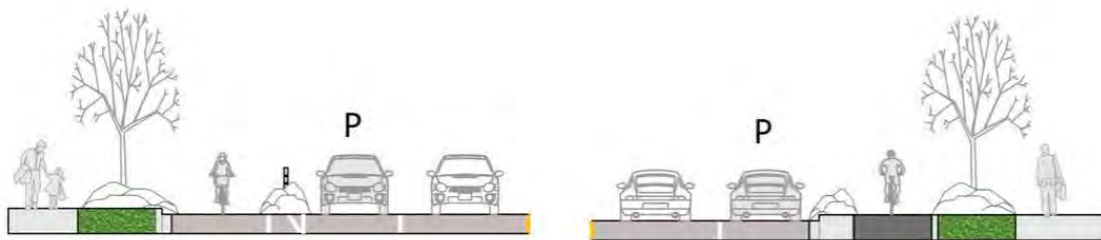
6.3.1 Cycling Facility Design for Snow Storage

Many of the recommended short-term priority projects are multi-use pathways. The Town already has a network of pathways and is therefore already familiar with best practices on how to clear and store snow. Further, multi-use pathways benefit from having additional space, which can be used for snow storage.

The Town will need to consider snow storage for all on-road protected bicycle facilities. As shown in the example below, the Town should design its cycling facilities to have a 1.8m storage space for snow on the side of the road or in the landscaping / boulevard area. This can facilitate easier snowplowing as the snow could be plowed into the designated storage space rather than the bike lane.



Example of snow clearance and snow storage in a protected bike lane in Ottawa.
Credit: Adam van der Zwan



Example of desirable design for snow storage in protected bike lanes. Credit: BC Active Transportation Design Guide⁴

6.3.2 Facility Sweeping

The presence of debris on an active transportation facility could make for a less comfortable—and safe—experience. Whether its gravel, broken glass, leaves, or something else, debris can be a barrier for users and presents hazards for those using the facilities. As such, it is critical to sweep the facilities on a regular basis.

In Okotoks, it is the responsibility of the property owner to sweep the sidewalk along their property of leaves and debris. For cycling and multi-use pathway facilities, it is more commonly the responsibility of the municipality. As the Town builds out the network, it is recommended that it consider the following:

- Incorporate multi-use pathways and protected bike lanes into a road sweeping program
- Create a schedule that prioritizes sweeping of road with cycling facilities seasonally
- Sweep facilities whenever there is an accumulation of debris that may pose a hazard

⁴ Government of BC. (2019). BC Active Transportation Design Guide. Chapter I: Post Implementation. Available online at: https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/cycling-infrastructure-funding/active-transportation-guide-low-res/2019-06-14_bcatdg_section_i_rfs.pdf

6.3.3 Maintenance of Signage and Pavement Markings

Signage and pavement markings are recommended for all new active transportation facilities. Whether its signage required for new pedestrian crossings or pavement markings (stencils) for neighbourhood bikeways and protected bikes lanes—they are useful for helping to identify the facility type for all road users. They can also provide wayfinding for people, and warn users of potential conflicts.

The Town will need to conduct regular inspection of signage and pavement markings to ensure they remain in good condition. For pavement markings, which could include stencils, solid or dashed lines, and/or turning lane arrows, it is important to select a material that is durable, visible, and provides adequate traction in all road conditions. Communities use a variety of treatments ranging from paint, epoxy, and thermoplastic and tape, for example.

The Town will need to consider which specific material it uses for all active transportation crossings and markings. Consideration should be given to thermoplastic and tape, which is highly durable and has a comparatively higher life span of 48 to 72 months.

7.0 NEXT STEPS

The Active Transportation Implementation Plan presents Okotoks with an opportunity to enhance its active transportation network to provide greater connectivity, safety, and accessibility for all users—irrespective of their age and ability.

The Plan provides an implementation roadmap for the next 10 years focused on delivering new active transportation infrastructure across the community. New infrastructure will need to be supported by policy changes and programs that support and promote active transportation. Lastly, an implementation plan is only successful if it is actively monitored and evaluated. As such, the plan should be regularly reviewed and tracked to see how well the expanded network is meeting the goals of this plan and continue to set Okotoks on a path towards an even more active community.

