Table of Contents

Table of Contents

List of Figures

List of Tables

List of Maps

List of Appendices

All Technical Appendices are found under a separate cover.

Technical Appendix A | Summary of Supportive Policies and Plan

Technical Appendix B | Consultation Summary

Technical Appendix C | Summary of Benefits

Technical Appendix D | Cycling Coordinator – Example of Job Description

Technical Appendix E | Network Database Tool

Acknowledgements

The Cycling Strategy study team would like to express their appreciation to Town staff, committee members and stakeholders that contributed to the development of this plan. We would also like to thank the members of the public who gave their time and contributed to the development of the Cycling Strategy including those who participated in the public open house, completed the online survey and all others who provided input to the study team.

The intent is for the Cycling Strategy to provide the Town and its partners with the tools and guidance necessary to improve conditions and opportunities for cycling now and in the long term.

Introduction

The Town of Penetanguishene is located in Simcoe County at the southeast shores of Georgian Bay, encompassing an area of diverse natural landscape that is rich in cultural and natural history. The Town is home to major institutions, employers and tourist destinations including the Waypoint Centre for Mental Health Care, the Central North Correctional Centre, Rotary Champlain Wendat Park, Discovery Harbour and five marinas.

The Town covers an area of approximately 25 square kilometres with a maximum east-west distance of 8 kilometres and a maximum north-south distance of 5 kilometres. In addition, the Discovery Harbour, an economic, tourism and local asset, is located in the middle of Penetanguishene. The unique size and geography of the Town make it an ideal location not only for short-distance commuter trips within the Town and to its surrounding municipalities, but also a destination for recreational and tourism based activities by bike.

There is a growing interest and awareness from residents, decision-makers, stakeholders and Town staff to enhance cycling opportunities within the Town. Developing a long-term strategy to guide future planning and decision-making to improve cycling infrastructure, policy and programming is the first step towards shifting the culture to a cycle friendly community and destination.

This is the Town of Penetanguishene's first Cycling Strategy. This document is meant to help the Town achieve its future aspirations and goals for cycling by providing the tools, strategies and recommendations to help affect change and support progress.

Section 1.0

1.1. About the Cycling Strategy

Cycling is a key component of equitable and inclusive transportation systems in the Province of Ontario and its local municipalities. Inclusion of cycling supportive policies and recommendations are becoming critical components of municipal planning documents to ensure better integration of land use and transportation planning. The provision and design for cycling infrastructure can help shape public spaces and built forms where people want to be, travel to and patronize.

The development of Penetanguishene's Cycling Strategy has been guided by past initiatives and projects undertaken at a Provincial, County and local level to support the planning and design of active and healthy communities. Collectively, the support and recommended actions from past initiatives have set the foundation for the Town to move forward with projects that enhance opportunities for cycling and active lifestyles. **Figure 1** provides an overview of key initiatives and plans that helped set the foundation for the Town's Cycling Strategy and that were reviewed to help inform the recommendations contained in the document. A detailed summary of all policies and plans that were reviewed is provided in **Technical Appendix A.**

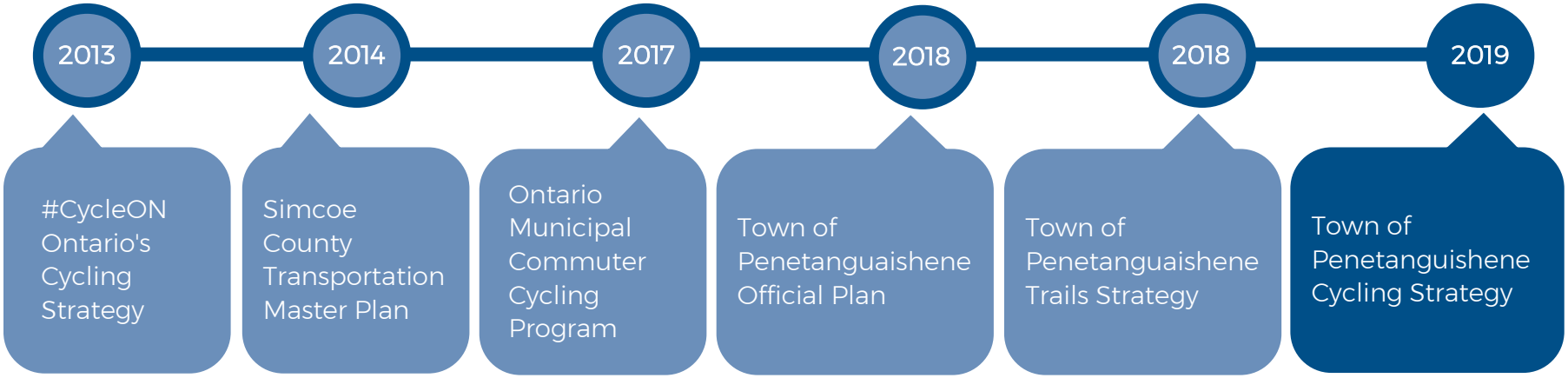


Figure 1 | Supportive Policies and Initiatives for the Penetanguishene Cycling Strategy

Section 1.0

In December 2017, the Town of Penetanguishene received funding from the Province of Ontario's "Ontario Municipal Commuter Cycling" (OMCC) Program. The OMCC Program was a program that provided funding to support the implementation of cycling infrastructure and projects. The Town of Penetanguishene received $25,000 in 2017. This funding was used to support the development of the Cycling Strategy, the Town's first long-term planning document to guide future planning, design, implementation and operations of cycling infrastructure, programming and policy.

The Cycling Strategy has been developed with input and involvement from Town staff, local stakeholders, committee representatives, residents and decision makers. The strategy is intended to provide clear next steps to help enhance opportunities for commuter cycling and tourism cycling over the next 20+ years. It is not intended to be prescriptive. The strategy is informed by existing processes and meant to adapt to future opportunities as a means of informing decision making, communications and coordination among those who will be responsible for implementation.

Town of Penetanguishene Council and Mayor
Photo Source | Town of Penetanguishene

Section 1.0

1.1.1. Who is the Cycling Strategy for?

The Town's Cycling Strategy is meant to address a range of cyclists that have different interests, abilities and skill levels. It is important that the recommendations contained in the Cycling Strategy reflect the needs and preferences of all cycling user groups to help encourage a broader range of people to cycle more often.

Research indicates there are four general categories of existing and potential new cyclists. These categories are meant to represent user comfort levels, experience and in some cases preferences when selecting a cycling route / facility. The four types of cyclists are presented in Figure 2.

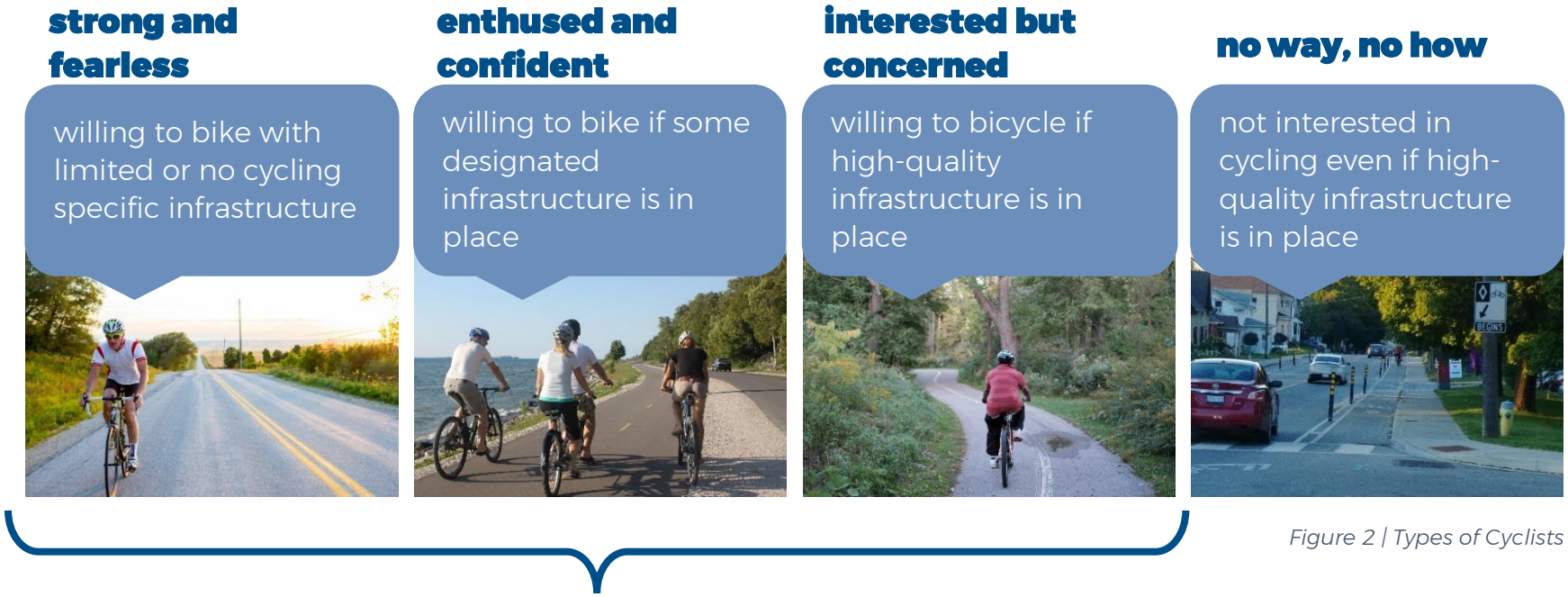


Figure 2 | Types of Cyclists

The Town of Penetanguishene's Cycling Strategy accommodates these three user groups with a specific focus on the *Interested but Concerned* group because these users typically represent a majority of the population. Improvements to cycling infrastructure could help engage users that identify as *Interest but Concerned* to cycle more often for a variety of trip purposes.

It is also important to understand the factors that could impact a cyclist's behavior and preferences. These factors help shape the information, tools and resources contained in the Cycling Strategy to inform a set of recommendations that are tailored for different user types. The factors that were considered when developing the Town of Penetanguishene's Cycling Strategy are summarized below.

Figure 3 | Summary of Influencing Factors for a Cyclist
Photo Source | WSP 2018

Section 1.0

1.1.2. Process Overview

The Town's Cycling Strategy was developed using a three-step process between June 2018 and April 2019. The process was informed by ongoing consultation and engagement with Town staff, residents and decision makers to ensure the recommendations contained in the strategy reflect the desired outcomes for cycling in Penetanguishene. **Figure 4** provides an overview of study process and key consultation milestones.

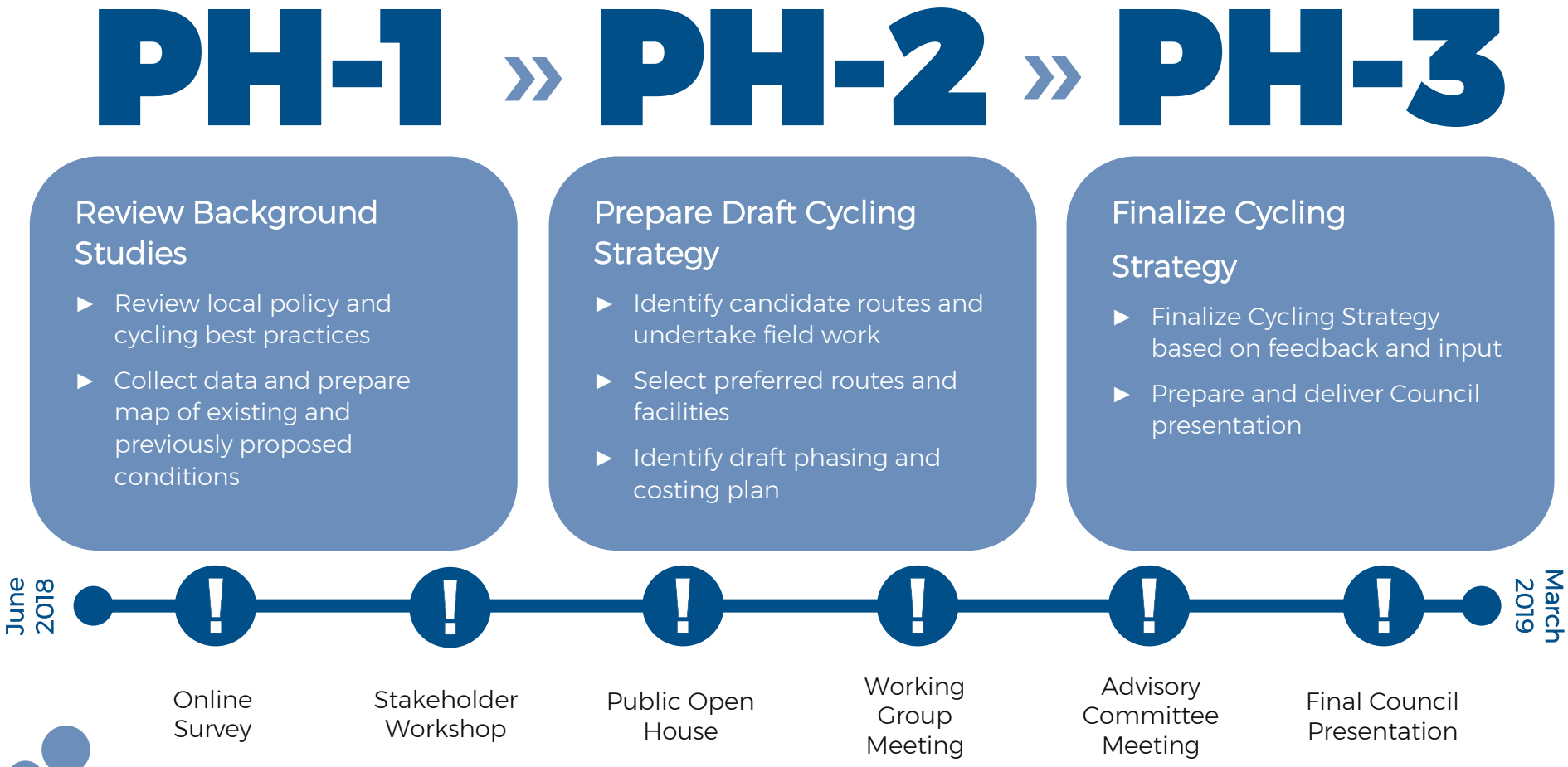


Figure 4 | Cycling Strategy Development Process

1.1.3. Engaging the Town

The development of the Town's Cycling Strategy was consistent with Master Plan Approach #1 of the Municipal Class Environmental Assessment (MCEA) Process. A key component of the MCEA Process is to provide meaningful engagement and consultation with residents, decisions makers and Town staff through a minimum of two points of contact during the study process. Two types of engagement methods were used during the study process: online and in-person events. An overview of each method and the events that were undertaken is provided below.

online engagement

purpose: provide an opportunity for people to give their input and feedback in an interactive manner that can supplement findings from in-person activities

number of activities: 1 survey

119 participants

4,600 data points collected

in-person engagement

purpose: provide residents and stakeholders with an opportunity to meet the study team, learn more about the project, ask questions about key issues and provide input on project deliverables.

number of activities: 2

27 total attendees

60+ written comments

Technical Appendix B provides additional details on the input gathered from each engagement and consultation event.

Section 1.0

1.1.4. Project Assumptions

There are a number of different assumptions about what a Cycling Strategy is meant to be. Some of these assumptions are accurate and others are beyond the intent and purpose of the document. Before presenting the strategy, it is important to identify what is it meant to be and what it is not intended to be, to set the expectations for its use.

What the plan is:

- A long-range blueprint;
- A tool to facilitate implementation;
- A communications tool; and
- A guide for future policies.

What the plan is not:

- A schedule of capital projects;
- A feasibility study for specific projects;
- A prescriptive policy document; and
- A commitment to costs and funding.

The plan is meant to be action oriented, giving Town staff and its partners some clear next steps to move forward with the implementation of cycling infrastructure, programs and initiatives. This strategy is meant to be a flexible and adaptable resource for staff and stakeholders and is intended to be a guide for future decision making for the planning, design and development of cycling infrastructure and supportive programs and policies. As such, any future changes to the Cycling Strategy should be reviewed and documented by Town staff in consultation with residents and stakeholders.

1.1.5. Strategy Content

The Town of Penetanguishene's Cycling Strategy is organized into the following chapters:

1 **Chapter 1 - Introduction**
Describes the study purpose, key assumptions, cycling trends, key themes of input gathered from residents and stakeholders, and guiding principles including the vision and objectives.

2 **Chapter 2 - Network**
Describes the network development process, the outcomes of each step and the proposed cycling network including routes and facility types.

3 **Chapter 3 - Design**
Describes facility design guidelines as well as context specific design considerations e.g. crossings and transitions.

4 **Chapter 4 - Outreach**
Describes the proposed outreach initiatives and programs to build a cycling supportive culture.

5 **Chapter 5 - Implementation**
Describes the proposed implementation recommendations and policy considerations.

Section 1.0

1.2. Cycling Context

The development of the Town's Cycling Strategy was informed by the current cycling context in Penetanguishene and an understanding of existing trends within the County and the Province. The recommendations and strategies contained in the Cycling Strategy are meant to reflect and build upon the cycling context including the Town's socio-demographics, the benefits of investing in cycling, user preferences and best practices. The following sections provide an overview of the various components that form the cycling context for Penetanguishene.

1.2.1. Town Trends

A scan of the Town's current demographics was undertaken to develop a better understanding of the conditions, influences and trends that form Penetanguishene's community profile. Establishing a community profile shapes the recommendations contained in the Cycling Strategy and ensures that the content in this document is specific to the Town and its residents. The community profile for Penetanguishene was developed using the following data sources:

1. Census Data
   The 2016 Census Data from Statistics Canada asked respondents to provide information on their age, marital status, language, education, labour, mobility, income and housing. The results establish profiles for municipalities and regions across Canada.

2. Transportation Tomorrow Survey 2016
   The Transportation Tomorrow Survey (TTS) survey is conducted every 5 years to collect information on travel trends in southern Ontario. TTS data topics include: trip purpose, mode of travel, median trip length and time period travelled.

3. Town of Penetanguishene Cycling Strategy – Online Survey
   The online survey included 21 questions and collected data regarding socio-demographic information, travel habits and design preferences from users.

Key findings that illustrate the Town's community profile and current trends are illustrated on the following two pages.

Section 1.0

25.6 km²
land area

350
persons / km²

8,962
2016 population (Census data)

11,000
2031 projection (2017 Growth Plan)

46
average age in Penetanguishene (Census data)

primary travel mode

2016 TTS

88.5%
auto

4%
walk

<1%
bike

7%
other

average distance to work

2016 TTS

16 km

Section 1.0

trip purpose by bike

online survey results

1% to and from school

12% to and from work

16% to run errands

52% for fitness

20% for tourism

current use

online survey results

76% respondents use bike routes in Penetanguishene

satisfaction level

online survey results

73% respondents enjoy using bike routes in Penetanguishene

important topics to address in the strategy

online survey results

13% to provide places to cycle throughout the various communities

13% to improve the quality of life and health of citizens

13% to connect to surrounding municipalities

13% to improve cycling as a transportation option

13% to connect existing parkland and recreational facilities

12% to provide access to historical / cultural destinations and support tourism

12% to reduce environmental impacts and greenhouse gas emissions

11% to connect youth and seniors to key locations

1.2.2. Benefits

Research shows that there are many benefits to investing in cycling that can be realized throughout a community and its residents. Investments in cycling infrastructure and programming can have positive impacts on the overall health, social, environmental, community and economic well-being of the Town. **Figure 5** provides an example of some benefits. A detailed overview of these benefits is provided in **Technical Appendix C**.

Figure 5 | Examples of Cycling Benefits in Penetanguishene
Photo Source | WSP 2018

1.2.3. Cycling Input & Considerations

Understanding where people currently bike in Penetanguishene can help establish the cycling context including opportunities for potential new routes and barriers that should be explored through the development of the Cycling Strategy. As part of the consultation and engagement program, input was collected from residents, stakeholders and Town staff on popular cycling routes and destinations in Penetanguishene. To supplement this feedback, Strava, an online fitness tracking platform was used to assess and understand routes that were most frequently used by cyclists who use the Strava application.

Figure 6 illustrates popular cycling routes and destinations based on feedback collected during the study process as well as information collected on Strava. The following is a high-level overview of how the information was collected:

Key Findings	How was it collected	
	Public / stakeholder input	Strava
Popular routes	✓	✓
Key destinations	✓	
Existing trail/ route systems	✓	✓

Based on the findings, popular cycling routes in Penetanguishene include:

- Linear east-west connections including Robert Street West / East and Poyntz Street;
- Existing paved shoulders on Fuller Avenue and Champlain Road;
- Existing trail systems including the Great Trail and the Penetanguishene Trail;
- Connections to employment areas including Church Street;
- Connections from residential areas to Main Street (commercial corridor) including Beck Boulevard, Fox Street and Maria Street; and
- Connections to surrounding municipalities.

Legend

- Popular Route
- Existing Route / Trail System
- Key Destination

Figure 6 | Popular Cycling Routes and Destinations

what is Strava?

Strava is a website and mobile application, that allows users to track their activity using GPS technologies. Using the data collected, a spatial representation is generated (also referred to as heat mapping) based on volume and frequency of routes travelled.

existing trails / routes

1. Champlain Road paved shoulders
2. Penetanguishene Trail
3. The Great Trail
4. Maria Street / Murray Road (Great Trail)
5. Fuller Avenue buffered paved shoulders

key destinations

1. Rotary Champlain Wendat Park
2. Penetanguishene Memorial Arena
3. Discovery Harbour
4. Waypoint Centre

Section 1.0

1.2.4. What are others doing?

Municipalities across Simcoe County and the Province have committed to investing and improving opportunities for cycling in their communities. Penetanguishene can learn from other municipalities to better understand common trends and best practices to inform infrastructure, program and policy improvements that enhance cycling opportunities in the Town.

Trends and best practices from four (4) municipalities in Ontario were reviewed to inform recommendations contained in the Town's Cycling Strategy. A summary of the municipalities that were investigated is provided in **Table 1**.

Table 1 | Peer Review

	The Blue Mountains	Gravenhurst	Midland	Pelham
Population	7,025	12,311	16,864	17,110
Weather	-10 to +25 degrees	-15 to +24 degrees	-13 to +25 degrees	-8 to +27 degrees
Mode Share[1]	Car: 91 Cycling: <1% Walking: 7% Other: 1%	Car: 92% Cycling: <1% Walking: 6% Other: <2%	Car: 86% Cycling: 1% Walking: 9% Transit: 4%	Car: 94% Cycling: <1% Walking: 4% Other: <2%
Supportive Policy	Official Plan (2016)	Age Friendly Active Transportation Plan (2017)	Transportation Master Plan (2017)	Active Transportation Master Plan (2016)
Existing Cycling Facilities[2]	Off-road trails: 64 km On-road routes: N/A	Off-road trails: 35 km On-road routes: N/A	Off-road trails: 18 km On-road routes: N/A	Off-road trails: 16 km On-road routes: 8 km

Notes:
1. Mode share is based on Journey to Work data from the 2016 Statistics Canada census program for each municipality.
2. Based on information publicly available and statistics contained in recent planning documents for each municipality.

The Town of Penetanguishene's Cycling Strategy is also informed by the successes of outreach and programming initiatives undertaken in these municipalities. A summary of these successes and key lessons learned is summarized on the following page.

The Blue Mountains

- Collaborates with local Health Units, Ontario Provincial Police and schools on safety, education and enforcement campaigns. Received $90,000 from the Ontario Municipal Cycling Infrastructure Program in 2016 to build additional cycling infrastructure to connect the downtown area to existing trails and destinations outside downtown.
- Designated as a "Silver" Bicycle Friendly Community by Share the Road.

Gravenhurst

- Developed an Age-Friendly Active Transportation Plan of Action which identifies guiding principles and immediate actions to better support active transportation, including cycling specific recommendations, within the Town.
- Partnered with YMCA and local municipalities from Simcoe County and Muskoka to fundraise for community members access fitness programs. The fundraising initiative included a variety of events including cycling sessions and other physical activities to help the community get active.

Midland

- Partners with Ontario Provincial Police (OPP) to host Bike Rodeos to educate children about safe cycling.
- Encourages the development of communities that allow people to get around by cycling by designing them to support a variety of uses and compact.

Pelham

- Hosts and organizes Slow Rolls – leisurely group cycling for all skill levels to help people get active and explore their community.
- Collaborates with the Active Transportation Committee and other local partners such as health units, schools and local police to lead bike rodeos to educate the public on cycling safety.
- Designated as a "Silver" Bicycle Friendly Community by Share the Road.

Section 1.0

1.3. Guiding Principles

The Cycling Strategy contains high-level guiding principles that are meant to reflect the community's aspirations and intended outcomes for cycling in Penetanguishene. They include a vision statement and set of objectives that were reviewed and refined using input from residents, stakeholders and Town staff. The following describes why the vision statement and objectives were created and how these will support cycling in the Town of Penetanguishene.

why develop a...

vision statement

to identify a high-level aspirational goal that reflects the desired outcomes of the Cycling Strategy.

set of objectives

to identify a set of action-oriented statements that explain how the vision can be achieved.

what is the...

vision statement

Cycling is a key component of the Town's transportation network. Penetanguishene's cycling network enhances mobility options for all residents and provides connected, accessible and safe connections throughout the Town. Cycling supports the Town's vision to be a diversified, balanced and sustainable community for its residents and visitors.

set of objectives

1. Design a continuous and connected cycling network by identifying routes and facilities that provide a comfortable and safe environment for users of varying ages and abilities.
2. Provide recreational, commuting and tourism opportunities within the Town of Penetanguishene and surrounding areas to increase the quality of life of local residents.
3. Preserve Penetanguishene's natural and cultural heritage and enhance local assets to ensure the Town's unique character is reflected in future cycling initiatives and that routes connect to key destinations.
4. Improve end-of-trip facilities such as bike parking, adequate lighting, water refill stations etc.
5. Increase cycling promotional, educational and outreach initiatives.

The guiding principles set the foundation from which the recommendations contained in this report were developed including infrastructure (section 2.0), design (section 3.0), outreach (section 4.0) and implementation (section 5.0).

2

Network

A key component of the Cycling Strategy is the recommended cycling infrastructure including the routes and facility types that are proposed to form part of a continuous and connected network in Penetanguishene. The Town's recommended cycling network is not intended to "reinvent the wheel" – it builds upon already existing routes, significant trail systems and routes that have been proposed in other approved documents.

The following section describes the Town's cycling network including the process that was undertaken to identify and confirm the preferred routes and facility types. Each step of this process was shaped by input received from Town staff, stakeholders and residents and informed by technical rigour undertaken by the study team.

The proposed cycling network identified in this section is not intended to be prescriptive. The network is shaped by a set of tools and resources that are intended to be used by Town staff and its partners to guide future decision making and as new opportunities arise. The proposed cycling network is intended to be flexible and adapt to new routes and modifications that are identified as Town staff move from the planning and design stages through to construction.

Section 2.0

2.1. Network Development

The process to develop the Town's cycling network included six steps and was informed by the input gathered by members of the public, stakeholders, and Town staff over the course of the study. An overview of the network development process including the steps and the outcomes of each step is presented in **Table 2**. The results of each step are documented in the following sections including what was done, how it was informed and the outcome of each step.

Table 2 | Cycling Strategy Network Development Process

network development process

Step		Outcome
1	Identify existing conditions and routes that have been proposed in past planning documents.	Map 1 – Existing and Previously Planned Cycling Routes
2	Identify a set of criteria to help select, assess and refine routes to form part of the preferred cycling network.	Route Selection Criteria
3	Identify potential candidate routes to be investigated and that could form part of the Town's cycling network.	Map 2 – Potential Candidate Routes
4	Undertake field work to investigate existing routes and locations for potential new routes.	Field work documentation
5	Confirm the Town's preferred cycling network including the proposed facility types.	Map 3 – Proposed Cycling Network by Facility Type
6	Identify a proposed phasing plan for the Town's preferred cycling network.	Map 4 – Proposed Phasing Plan

The details of step 6 including the proposed phasing plan for the Town's cycling network are documented in section 5.0 of the Cycling Strategy.

Step 1 – Existing Conditions

what was done?

Information was gathered from the Town of Penetanguishene to develop a database of spatial information – a geographic information systems (GIS) database. The database included information regarding existing conditions and routes that were previously identified in approved planning documents including the Town's Official Plan (2018), Trails Strategy (2018) and the Simcoe County Transportation Master Plan (2014). The GIS database was updated on an on-going basis to reflect the iterative approach of the network development process.

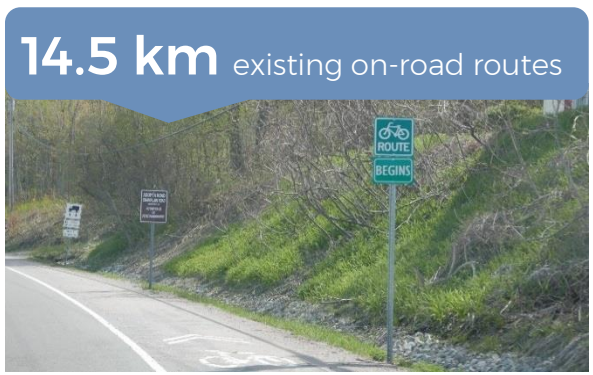
It is important to note that not all previously proposed routes form part of the Town's cycling network. These routes were used as a starting point of the network development process and further investigated during each step of the process.

how was it informed?

- GIS database of existing routes
- Council approved planning documents e.g. Town's Official Plan, Town's Trails Strategy and the County's Transportation Master Plan
- Plans of subdivisions

what is the outcome?

Map 1 – Existing and Previously Proposed Conditions
Figure 7 | Statistics of Existing Routes



20.2 km

existing cycling routes including:

- The Great Trail
- Heart of Georgian Bay Route
- MTO Province-wide cycling network

Figure 7 | Statistics of Existing Routes

Section 2.0

Step 2 – Route Selection criteria

what was done?

A set of criteria were established to help inform the selection of routes to form part of the Town's cycling network. The criteria reflect the planning and design principles identified in plans of a similar scope and scale and those outlined in widely accepted planning and engineering guidelines.

Route selection criteria are meant to be used beyond the lifespan of the Cycling Strategy by Town staff as future opportunities arise and / or when changes to the cycling network are being investigated. The route selection criteria are meant to guide the selection of routes that could help achieve the Town's vision for cycling.

how was it informed?

- Vision and objectives (refer to section 1.3, page 22)
- Existing cycling guidelines e.g. Ontario Traffic Manual Book 18: Cycling Facilities

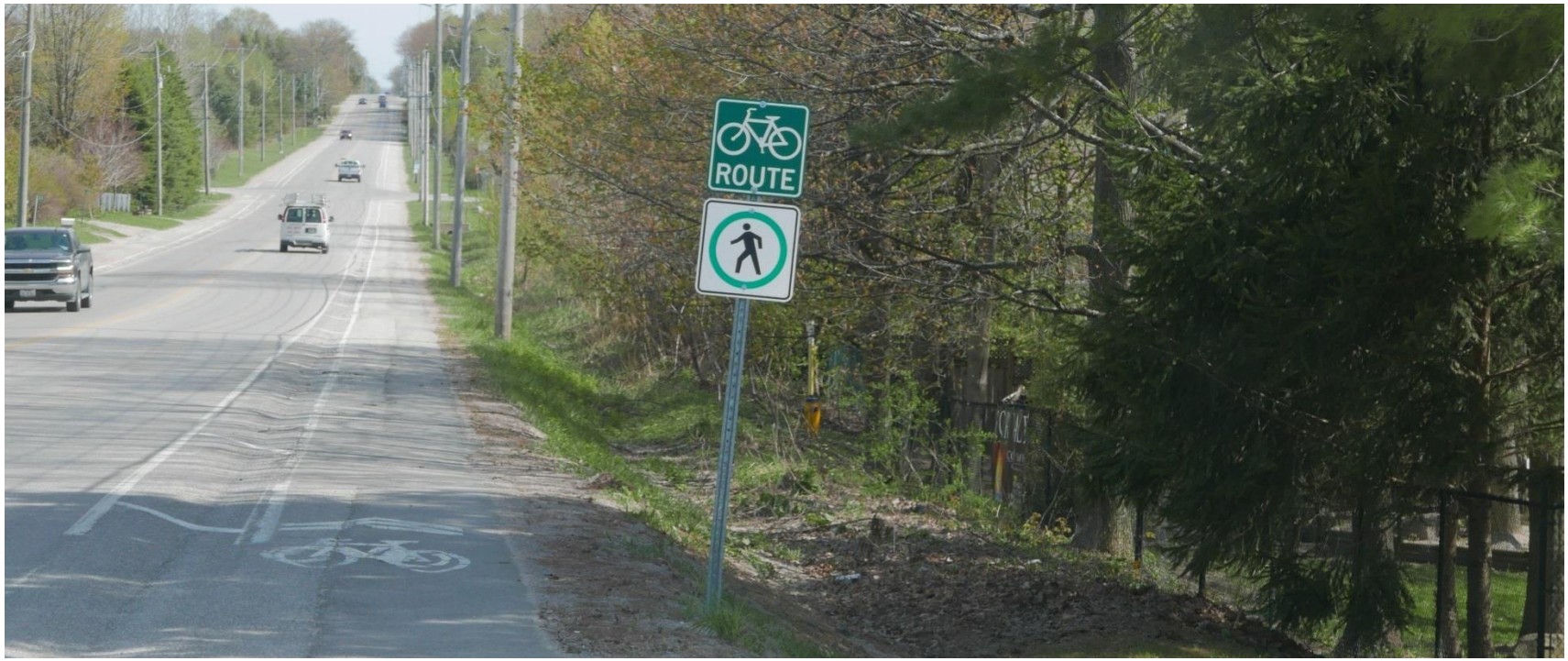
what is the outcome?

Table 3 | Route Selection Criteria

Table 3 | Route Selection Criteria

Criteria	Consideration
Accessible and connected	Does the route connect to key destinations such as community hubs, employment areas, etc.? Does the route connect to another cycling route?
Attractive and Interesting	Does the route take advantage of scenic areas and provide users with the opportunity to experience the cultural and natural heritage?
Comfortable and Safe	Does the route reduce the potential risk between roadway users and cyclists?

Criteria	Consideration
Cost-Effective	Would the construction of a route require a disproportionate amount of the budget relative to the potential use of the facility?
Consideration of Future Use	Does the route have potential to increase the number of cyclists using it in the future?
Diverse	Does the route appeal to a range of user abilities? Does the route provide opportunities for different trip purposes e.g. touring, commuting?



Fuller Avenue buffered paved shoulder
Photo Source | WSP 2018

Section 2.0

Step 3 – Candidate Routes

what was done?

A candidate route represents a potential cycling connection that could form part of the preferred network. Candidate routes were applied identified the route selection criteria (see step 2) and input received over the course of the study. Candidate routes were identified to complete gaps in the existing and previously proposed network, as well as upgrades to existing routes.

All the potential candidate routes were mapped and provided to Town staff for review and input. The selected candidate routes were further investigated as part of step 4 to confirm the appropriateness and suitability of the route and to confirm the preferred cycling network (see step 5).

how was it informed?

- Route selection criteria
- Input from Town staff, stakeholders and residents

what is the outcome?

Map 2 – Candidate Cycling Routes

There are two types of candidate routes illustrated on the map:

Potential Route for Consideration
Potential new route without existing cycling infrastructure that was investigated in step 4

Proposed upgrade to existing route
Existing cycling route that could be considered for upgrade to better reflect surrounding land context and current design standards

Step 4 – Route investigation

what was done?

Field investigations were undertaken to better understand the existing conditions, previously proposed routes and potential new candidate routes. Photos and information were documented for each route and location investigated, including traffic speed, traffic volume, roadway width, on-street parking, surrounding land uses and local destinations. These field investigations were supplemented by a desktop review allowing the team to revisit specific routes and consider the route selection criteria.

The information gathered during these reviews informed the selection of potential routes for the Town's cycling network and preferred facility types (see step 5). Field observations were also used to help identify potential locations where consideration could be given to enhancing a crossing between an existing or proposed cycling route and the roadway.

how was it informed?

- GIS database of existing, previously proposed and candidate routes
- GIS database of land use and transportation features to supplement additional desktop review

what is the outcome?

Database of photos and field observations – refer to **Figure 8** for examples of the study team during field investigation.

Figure 8 | Study team during field investigations in Penetanguishene
Photo Sources | WSP 2018

Section 2.0

Step 5 – Confirm network and facility types

what was done?

The selection of routes to form part of the Town's cycling network was informed by the findings from steps 1 to 4 as well as input received from Town staff, stakeholders and member of the public. In addition to this information, the study team assessed the following factors to further refine the preferred routes for the Town's cycling network:

- Existing road right-of-way
- On-street parking
- Anticipated traffic volume
- Posted speed
- Sightline constraints
- Surrounding destinations

Once the routes were confirmed, a process to identify the most appropriate facility type for each route was undertaken. The process was based on the three-step facility selection tool identified in Ontario Traffic Manual (OTM) Book 18: Cycling Facilities. The three-step process is presented in Figure 9. Preferred facility types were assessed and confirmed for existing, previously planned and new cycling routes being proposed.

It is important to note that the Province's primary design guidelines for cycling facilities, OTM Book 18, is currently being updated and it is expected that the thresholds for separated cycling facilities will be reduced. For example, the preference to have designated or separated cycling facilities will be identified for traffic volumes lower than what is currently identified in OTM Book 18. It is recommended that Town staff refer to the current guidelines (and forthcoming updates) when planning and designing cycling infrastructure.

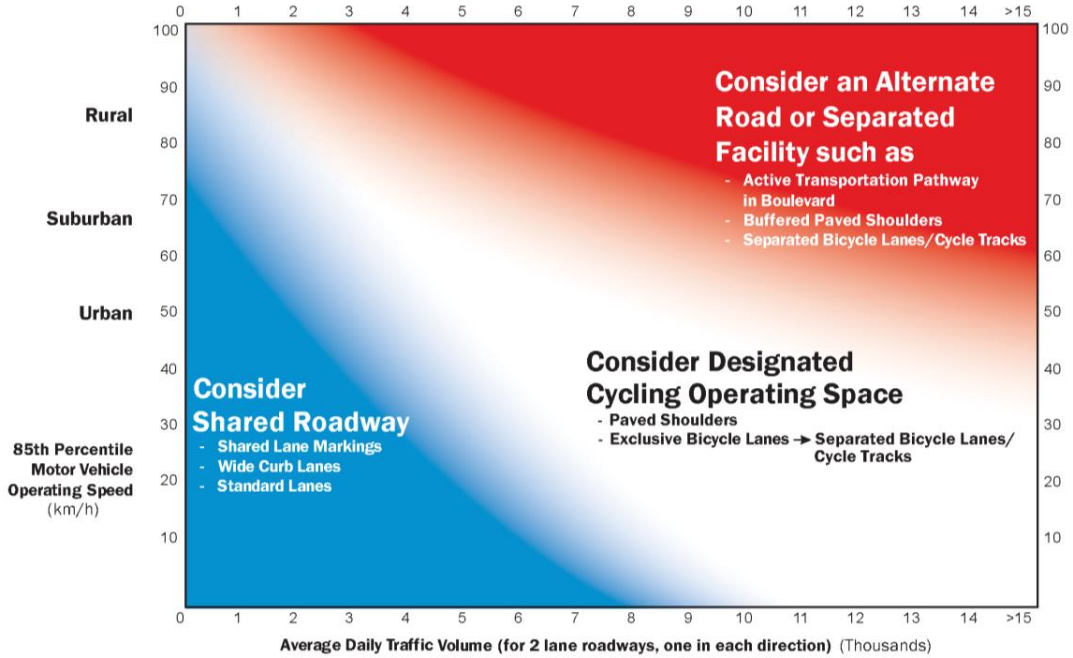
how was it informed?

- Findings from investigations (step 4) and application of route selection criteria (step 2)
- Additional desktop review using Google Earth imagery
- Input from Town staff, stakeholders and residents
- Figure 9 | OTM Book 18 Three-Step Facility Selection Process

what is the outcome?

Map 3 – Proposed Cycling Network by Facility Type

OTM Book 18 Step 1: Facility pre-selection nomograph



how to use the nomograph?

1. Determine or estimate Average Daily Traffic Volume. If the roadway has more than 2 travel lanes, refer to the footnote regarding multilane arrangements and use of the nomograph. A minimum buffered facility is preferred where there are more than two lanes of travel.
2. Determine or estimate the motor vehicle operating speed of the roadway (85th percentile speed is preferred).
3. Read the pre-selected level of separation from the nomograph.
4. Continue to validate findings through the facility selection process (steps 2 to 4).

Figure 9 | OTM Book 18 Three-Step Facility Selection Process

Section 2.0

OTM Book 18 Step 2: Examine contextual factors

Review additional considerations that are not captured in the pre-selection nomograph. The additional level of assessment is intended to confirm the initial pre-selection or to identify if there are additional design treatments that are required to implement a suitable facility. Additional considerations for on and off-road cycling routes can include:

on-road facilities

- Function of the roadway
- Vehicle mix & speed
- Collision history
- Cost
- Anticipated use
- Type of improvement
- On-street parking
- Intersection frequency

off-road facilities

- Connectivity
- Environmental protection
- Safety
- Potential use and user experience
- Topography
- Cost
- Maintenance
- Accessibility (AODA)

OTM Book 18 Step 3: Recommend and Document

Based on the results of steps 1 and 2, recommend the preferred cycling facility type for on and off-road routes. For the Town of Penetanguishene these include:

on-road facilities

- buffered paved shoulder
- paved shoulder
- signed bike route

off-road facilities

- off-road trail
- in-boulevard multi-use path

In addition to the facility types, a number of locations were identified for consideration to enhance the crossing of existing and / or proposed cycling routes at roadways. These proposed crossing enhancements were identified based on input received from Town staff, stakeholders, members of the public and observations noted during field investigation (step 4). In total, seven (7) crossing enhancements are proposed. Map 3 illustrates the locations where these are proposed. Additional design guidance and consideration for crossing enhancements is provided in section 3.0.

2.2. Penetanguishene Cycling Network

In total, the Town of Penetanguishene cycling network is made up of 46 kilometres including 20 kilometres of existing routes and 26 kilometres of proposed routes. A summary of the Town's cycling network is provided in **Table 4**.

Table 4 | Summary of the Penetanguishene Cycling Network

Facility Type	Existing KM	Proposed KM	Total KM
Off-road trail	5.2	2.6	7.8
In-boulevard multi-use path[1]	0.4	0.6	1.0
Buffered paved shoulder	3.9	5.5	9.4
Paved shoulder	8.0	5.3	13.3
Signed route	2.6	12.0	14.6
Total	**20.2**	**25.9**	**46.1**

Note:
1. The proposed in-boulevard multi-use path is located along a County owned road (County Road 93) from the Town boundary to Thompson Road.

The recommended network is intended to be a blueprint for the implementation of cycling facilities throughout Penetanguishene, and is intended to be used as a guide for future decision-making by those responsible for the strategy's implementation including Town staff and its partners.

The recommended cycling network is also intended to be flexible so new opportunities that arise in the future can be accommodated in the strategy. This flexibility is also intended to accommodate the addition of routes and / or revision of facility types as the strategy evolves over time.

Section 2.0

Network Recommendations

1. The route selection criteria identified in section 2.1 (step 2) should be used beyond the lifespan of the plan when new routes are being considered to determine how best to integrate these routes with the Town's cycling network.

2. The OTM Book 18 three-step facility selection process should be used by Town staff and its partners as the network is implemented and as new routes are identified. It is recommended that the forthcoming update of OTM Book 18 be used as the primary design reference when planning, designing and implementing routes.

3. It is recommended Town staff leverage future opportunities to upscale cycling facilities when roads are next scheduled for reconstruction to provide facilities with greater separation from motor vehicle traffic.

4. Adopt the recommended cycling network illustrated in **Map 3** as a guide for the development of a connected and continuous network throughout Penetanguishene.

3

Design

The Town of Penetanguishene's cycling network is intended to be designed based on sound engineering judgement, best practices and current guidelines. The design of cycling routes is not a one size fits all approach. Facilities should be planned and designed to reflect the context specific characteristics of the location where it is being built. In addition to the design of facility types included in the Town's cycling network, there are a number of additional design considerations that can be implemented to enhance the overall user experience and level of comfort for a cyclist.

The following sections provide an overview of existing design resources and considerations that are recommended to be addressed when planning, designing and implementing the Town of Penetanguishene's cycling network. It is recommended that Town staff and partners refer to existing guidelines and standards to ensure that the infrastructure being designed is consistent with widely-accepted documents and resources.

Section 3.0

3.1. Design Resources

Consistency is a key factor when planning and designing a cycling network. The routes and facilities that are proposed to form part of the Town's cycling network should be consistent with existing guidelines and standards. Ontario Traffic Manual (OTM) Book 18: Cycling Facility and the Ministry of Transportation Ontario (MTO) Bikeways Design Manual are considered to be the most applicable resources for cycling facility design in Ontario. These guidelines can be supplemented by other documents from provincial, national and international sources.

A summary of guidelines and standards that were considered during the network development process include:

international sources

- National Association of City Transportation Officials Urban Bikeway Design Guide
- American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities.

national sources

- Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads
- Transportation Association of Canada (TAC) Bikeway Traffic Control Guideline for Canada

provincial sources

- Ontario Traffic Manual Book 18: Cycling Facilities
- Ontario Traffic Manual Book 15: Pedestrian Crossing Treatment
- Ministry of Transportation Ontario (MTO) Bikeways Design Guidelines
- Accessibility for Ontarians with Disabilities Act

did you know?

OTM Book 18: Cycling Facilities is currently being updated and will incorporate new best practices regarding facility types, design considerations and crossing treatments.

The design guidelines are recommended to be used by Town staff when moving forward with the planning, design and implementation of future cycling facilities in Penetanguishene. Building upon these guidelines, the following sections outline design considerations for the various facility types included in the Town's cycling network and additional enhancements that could be considered when implementing the cycling network.

3.2. Understanding the Facility Types

There are a number of facility types that are already existing or proposed to be included in the Town's cycling network. The following provides an overview of these facility types. For additional design guidance refer to OTM Book 18.

paved shoulder

Paved shoulders provide a designated space along the edge of the road. The shoulder is intended to be a priority space for cyclists and other active transportation users. The route should be signed as a bike route with supplementary markings and signage to denote that other users such as pedestrians may use the paved shoulder. The preferred minimum width of a paved shoulder is 1.5 meters.

Paved shoulders should be applied on roads with medium motor vehicle operating speed and traffic volumes. Paved shoulders are not ideal for roadways with high volumes of truck traffic. An example of a paved shoulder is illustrated in **Figure 10.**

Figure 10 | Champlain Road paved shoulders
Photo Source | WSP 2018

buffered paved shoulder

Buffered paved shoulders provide horizontal separation (0.5 metres minimum) between the shoulder and adjacent motor vehicle traffic. Buffered paved shoulders are suited to roadways with medium to high motor vehicle operating speeds and traffic volumes. It is recommended that buffer zones be implemented if there are more than 30 trucks operating on the route per hour. Rumble strips can be implemented in conjunction with a buffer zone to provide a tactile warning to drivers that they have departed the travel lane and are about to encroach into the shoulder. An example of a buffered paved shoulder is illustrated in **Figure 11.**

Figure 11 | Fuller Avenue buffered paved shoulders:
Photo Source | WSP 2018

signed bike route

A signed bike route is a shared facility that is formally marked by a green bike marker sign. The marker sign is intended to indicate to motorists that they should be aware of cyclists on the road and provides route confirmation for cyclists. Supplementary signage or pavement markings can be used such as “Share the Road” or painted sharrow symbols for wayfinding.

Signed bike routes are only to be implemented on roadways with low motor vehicle operating speed, traffic volumes and truck volumes. An example of a signed bike route is illustrated in **Figure 12**.

Figure 12 | City of Barrie signed bike route
Photo Source | WSP 2018

in-boulevard multi-use path

In-boulevard multi-use paths are physically separated from motor vehicle traffic by a boulevard between the path and motor vehicle traffic lane. The multi-use path is constructed adjacent to the roadway but within the road right-of way. They are shared among pedestrians, cyclists and other active transportation users.

In-boulevard facilities provide the highest level of separation for cyclists, and are typically used when motor vehicle operating speed and volumes are very high. The increased separation can improve the comfort level for all users of the facility. The increased separation comes at additional cost and level of effort to construct as it typically requires new construction adjacent to the roadway.

The path is typically 3.0 to 4.0 metres wide. If there are significant constraints such as utilities or major natural features, a two-way shared path may be narrowed down to 2.4 metres such that costly construction activities can be avoided. An example of an in-boulevard multi-use pathway is illustrated in **Figure 13**.

Figure 13 | City of Barrie in-boulevard multi-use pathway
Photo Source | WSP 2018

off-road trail

Off-road trails are located outside of a road right-of-way are typically found within hydro corridors, forest tracts and parks. These connections function as recreational facilities or convenient connections between core cycling routes. Similar to an in-boulevard trail, an off-road trail is intended to be shared between cyclists, pedestrian and other non-motorized users.

Off-road trails could be a variety of surface types depending on the location and context and surrounding land uses. Natural surfaces or crushed limestone are appropriate surface types. If the demand for trail usage is high or if the trail forms part of a larger trail system, consideration could be given to pave the trail. In the planning and design of off-road trails, due diligence should be completed to ensure AODA compliance and environmental impacts are analyzed and mitigated. An example of an off-road trail is illustrated in **Figure 14.**

Figure 14 | Trans Canada Trail in Penetanguishene
Photo Source | WSP 2018

A summary of typical characteristics of the facility types (based on OTM Book 18) included in the Town's cycling network is provided in **Table 5**.

Table 5 | Characteristics of Proposed Facility Types included in the Penetanguishene Cycling Network

Facility	Traffic volumes (ADT)	Operating speed	# of trucks	Road / Boulevard Impact	Facility Width
Paved Shoulder	2,000-5,500	40-80 km/h	<30 / hour	Medium	1.2 – 1.5 metres
Buffered Paved Shoulder	5,500 – 10,000	40-80 km/h	>30 / hour	High	1.2 – 1.5 metres + 0.5 – 1.5 metre buffer
Signed Route	<2,000	<40 km/h	<30 / hour	Low	3.0 – 4.0 metre travel lane
In-boulevard Multi-use Path	10,000	>50kph	Low to High	Very High	3.0m – 4.0 metre + 0.6 metre offset from back of curb
Off-road Trail	N/A	N/A	N/A	N/A	3.0 – 4.0 metre Min. Horizontal Clear zone: 1.5m

Section 3.0

3.3. Additional Considerations

The Town's cycling network includes a number of routes that cross challenging land use and transportation features. Designing facilities at these locations can be challenging due to the right-of-way width, traffic volume, vehicle operating speeds, roadway function, culverts and grade / elevation change, environmental features, etc. Map 3 illustrates seven (7) locations where potential crossing enhancements could be considered including:

- Trans Canada Trail crossing at Robert Street West and Centre Street
- Robert Street East and Fox Street
- Trans Canada Trail crossing at Beck Boulevard and Fox Street
- Robert Street East and Fuller Avenue
- Crossing of proposed off road trail at Robert Street West and Park Street
- Trans Canada Trail at Overhead Bridge Road
- Robert Street West and Main Street

There are a number of enhancements which can be implemented to help a user cross a route that traverses a roadway or physical barrier. A total of three (3) types of potential crossing enhancements are being identified for the Town's consideration. These enhancements are intended to increase a user's sense of comfort and safety when crossing a route and to increase the visibility of cyclists so motorists are more aware of their presence. The design enhancements are described in more detail below. In addition to the proposed crossing enhancements, the following sections outline other design considerations that should be reviewed when planning, designing and implementing the Town's cycling network.

bike boxes

A bike box is a designated area between the crosswalk and the stop bar at an intersection. The box provides cyclists with a visible area to advance in front of traffic, and queue while waiting for the traffic signal to change. The bike box is intended to make cyclists more conspicuous and to provide them with a head start at the beginning of a green signal. The bike box is typically painted green to distinguish the queueing area and covers the entire length of travel and/or turn lanes.

Figure 15 provides an example of a bike box that connects to a separated bikeway in London, Ontario.

Figure 15 | Bike Box in London, Ontario
Photo Source | WSP 2018

pavement markings

Pavement markings are typically painted onto the asphalt surface of the roadway with the following three purposes:

- Visually warn drivers and cyclists of a potential conflict zone;
- Provide localized guidance to assist cyclist navigation through an intersection or conflict zone; and
- Incorporated as part of the wayfinding system.

Green pavement markings are typically used to show strong visual contrast in conflict zones. Municipalities in Ontario have used green markings over driveway and intersection crossings and conflict zones. In Penetanguishene, pavement markings are applied on paved shoulders and buffered paved shoulders to remind active transportation users and drivers to reinforce that non-motor vehicle traffic are not intended to use the shoulder. Pavement markings can be used to guide cyclists through transitions and intersections. Figure 16 provides an example of pavement markings on the approach to an intersection in London, Ontario.

Figure 16 | Green Pavement Markings in London, Ontario
Photo Source | WSP 2018

Section 3.0

Not all intersections and transitions can be geometrically ideal due to physical constraints. Pavement markings are an effective method to guide cyclists where the crossing configuration may not be immediately intuitive. Other pavement markings include the use of skip lines, bicycle stencils and chevrons that can be used to guide cyclists in various directions or even through turns. Pavement markings are not exclusive for application on roadways. Pavement markings such as center lines are occasionally applied onto trail facilities to separate direction of travel. Pavement marking systems such as bike stencils and directional arrows can be applied to guide cyclists through a set of connected routes.

crossrides

Crossrides allow cyclists to legally ride through an intersection or driveway. As part of the development of the current OTM Book 18, a crossride was developed as a new facility because the Highway Traffic Act does not permit cycling through a crosswalk. Therefore, it was important to develop and implement a dedicated intersection treatment that is convenient and minimizes conflicts for cyclists. Crossrides are essential to provide marked channels through intersections and as a method to provide mid-block connectivity (e.g. the trail crossing at Robert Street West).

Crossrides can be implemented at both signalized and unsignalized locations. Where there is a traffic signal and higher pedestrian, cyclist and vehicle volumes, a separate crossride is the preferred treatment. Separate crossrides are where pedestrian and cyclist traffic travel parallel but not together. A mixed crossride is typically used at low volume, unsignalized crossings where mixing of pedestrians and cyclists are not a major issue. A mixed crossride is shared crossing where pedestrians and cyclists cross in the same space. This type of crossride requires the least amount of space as specified in OTM Book 18 and may allow for more flexible implementation during a retrofit.

Examples of crossrides are presented in **Figure 17**.

Figure 17 | Separate crossride in Toronto, Ontario (top) & Mixed crossride in Richmond Hill, Ontario (bottom)
Photo Sources | WSP

3.3.1. Additional Considerations

Cycling infrastructure includes more than just linear facilities and intersection treatments. Implementing supportive amenities along major destinations can make cycling more attractive and convenient. End-of-trip facilities can include bicycle parking, water fountains, washrooms, bike repair tools/stations lockers for personal belongings, benches for rest, garbage/recycling receptacles, showering facilities and bike washing stations.

The Town of Penetanguishene has a number of end-of-trip facilities. These include bike repair stations, bike racks for short term storage, drinking fountains, benches, washrooms, and garbage/ recycling receptacles. Many of these facilities are located in or near parks and key destinations. **Figure 18** illustrates the free bike parking and repair station that is located at Penetanguishene's Village Square Mall.

Figure 18 | Bike repair station at Village Square Mall.
Photo Source | Midland Mirror 2017

3.3.2. Bike Parking

Bike parking is a key component to a cycling network. Access to safe and secure bicycle parking where there are major destinations (i.e. Discovery Harbour, Penetanguishene Memorial Community Centre, etc.) is critical to increase the number of cycling trips within the Town. Bike parking should be close to the key destinations in the Town, and be in a well-lit and public location.

It is important to consider how long cyclists would stay at a certain destination. For example, someone who cycles to work would require long-term and secure bike parking. Another user who cycles to shop would want short-term and convenient bike parking. Depending on the context of the target user, the selection of bike parking facility may be different. The following outlines the key characteristics of long and short-term parking.

long-term bike parking

Long-term bike parking is typically placed in commercial or employment dense areas. This type of parking facility is designed to meet the needs of users who leave their bicycles parked for longer periods of time, requiring higher levels of security and protection from the elements. Typical types of long term bike parking include lockers and bike shelters.

short-term bike parking

Short-term bike parking is designed for trips purposes with high turnover rates such as retail shopping trips or running errands. Short-term bike parking users typically value parking configurations that a convenient and quick to use. Figure 19 illustrates examples common types of short-term bike parking.

Inverted U **Post & Ring** **Corral**

Figure 19 | Common Types of Short Term Bike Parking
Source | Association of Pedestrian and Bicycle Professionals Essentials of Bike Parking

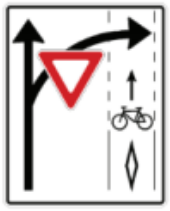
3.3.3. Wayfinding and Signage

Signage is an important component of a cycling network that provides wayfinding, regulatory, etiquette and warning information to cyclists as well as other roads users. Signage can be used to enhance a user's awareness of routes, level of comfort and enjoyment and also help to mitigate conflict and risk. **Table 6** provides an overview of the various signs that should be considered for implementation as part of the Town's cycling network.

Table 6 | Regulatory, Information and Warning Signage

Sign Type, Code & Dimensions	Description	Application	Reference	Other Information
Bicycle Route Marker Sign  M511 (OTM) 450mm x 450mm	To be used on segments of a shared roadway that are designated as a bicycle route.	▸ Signed Bike Route ▸ Paved Shoulder	OTM Book 18, Section 4.1.1.2 (page 44)	▸ Placed every 2.0km on rural roadways. ▸ Placed every 400m to 800m on urban roadways. ▸ Installed on the far side of major intersections or other major decision points.
Share the Road Sign  Wc-19 (OTM) 600mm x 600mm  Wc-19t(OTM) 300mmx 300mm	Intended to caution all road users on the approach to locations where there may be a change in the road configuration.	▸ Signed Bike Route ▸ Paved Shoulder	OTM Book 18, Section 4.1.1.2 (page 46)	▸ In locations where motorists are discouraged from passing cyclists, (i.e. where lane widths are narrow) the 'Shared Use Single File' sign (Wc-24, OTM) and supplementary tab sign (Wc-24t, OTM) should be installed.

Section 3.0

Sign Type, Code & Dimensions	Description	Application	Reference	Other Information
Shared Pathway Sign  Rb-71 (OTM) 300mm x 450xx	To be installed along in-boulevard shared-use facilities and off-road trails to indicate that users are expected to share the space.	▸ In-boulevard multi-use path ▸ Off-road trail ▸ Paved Shoulder* ▸ Buffered Paved Shoulder* **Typically found in rural contexts*	OTM Book 18, Section 4.4.1.2 (page 117)	▸ Signs should be mounted with a minimum clearance of 2.5m between the pavement surface and lower edge of the sign. ▸ Installed on the far side of major intersections or other major decision points.
Turning Vehicles Yield to Bicycles Sign  RB-37 (TAC) 60cm x 75cm	Used at conflict zones where motorists turn across a bicycle facility and are required to yield to cyclists.	▸ Paved Shoulder ▸ Buffered Paved Shoulder ▸ In-boulevard multi-use path	OTM Book 18, Section 4.3.1.2 (page 110)	▸ The sign should incorporate the type of bicycle facility marking or treatment present in the conflict zone.

To supplement regulatory, information and warning signage, wayfinding signs can be implemented to encourage more residents to engage in active forms of travel and recreation as well as tourists who are not familiar with the Town's cycling network. The wayfinding concept outlined in the following sections describes how signage, pavement markings and other wayfinding features can improve the usability of the Town's cycling network and routes.

Destination Information (Advanced Decision) signs provide users with distances and directional guidance to key destinations. These signs should include distance in kilometres and directional arrows to help users plan their route and inform them of the surrounding area. Destination Information signs should be provided 40 to 50 metres before key decision points and display only a limited amount of information. Signs should feature no more than six destinations, and be ordered from the closest to the farthest destination. **Figure 20** provides examples of Destination Information signs.

Route Identification (Confirmation) signs help to assure cyclists that they are on their intended route. They should be provided 20 to 30 metres after an intersection, a change in facility type, or other major decision points along a route. Additionally, Route Identification signs should be provided at 400 to 800 metre intervals. These signs may be produced in large batches with generic designs to save costs or may be combined with Destination Information signs to include distances to key destinations. **Figure 21** provides examples of Route Identification signs.

Figure 20 | Example of Destination Information Signage *Figure 21 | Example of Route Identification Signage*
Source | Design Standards for York Region Pedestrian and Cycling Facilities

Directional (Turning) signs provide guidance when routes require a cyclist to make a turn. They should be provided 5 to 10 metres before an intersection or trailhead and / or on the opposite side of an intersection. These signs should feature a bicycle icon and an arrow to direct cyclists to nearby cycling facilities or to significant network connections. Directional signs may be combined with Route Identification signage.

Figure 22 provide examples of Directional signs.

Figure 22 | Example of Route Identification Signage
Source | Design Standards for York Region Pedestrian and Cycling Facilities

Additional Wayfinding Support

Wayfinding signage can be complimented with several other supporting features and resources for navigating on and off-road facilities. Pavement markings, trailhead maps, and digital/mobile information all play a part in how users plan and navigate their trips.

Pavement Markings and Sharrows can support Directional and Route Identification wayfinding signs. These markings should include a 1.0 metre by 2.0 metre bicycle stencil and 0.1 metres thick by 0.6 metre tall chevrons. The chevrons may be straight to assist Route Identification wayfinding or angled at 45 or 90 degrees to support directional wayfinding. Sharrows with turn directions should be provided to guide users from secondary to primary routes or to guide users to stay on a primary route. **Figure 23** provides examples of pavement markings to support wayfinding signage.

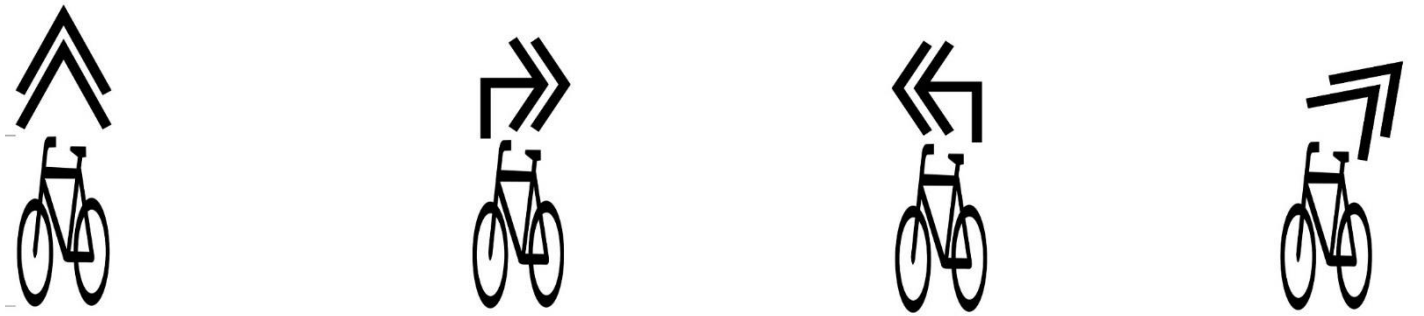


Figure 23 | Example of pavement markings to support wayfinding
Source | City of Toronto Wayfinding Guidelines

Trailhead maps are an important resource for users to understand a trail system's connectivity to key destinations and to identify locations that may have accessibility challenges. Trailheads provide the appropriate information to give residents and visitors confidence to explore the trail system. These maps should highlight connections to key destinations, approximate travel times, and points of interest along the trail. Signage should have high tonal contrast and design and positioning that meets AODA requirements. **Figure 24** illustrates an example of AODA compliant trailhead signage.

A recreational trail must have a trail head at major access points that provide the following information:

- Length and surface type of trail;
- Average and minimum width of trail;
- Average and maximum running slope and cross slope; and
- The location of amenities.

Figure 24 | Example of AODA Compliant Trailhead Sign (Aurora, ON)
Photo Source | WSP 2017

Section 3.0

Design Recommendations

1. OTM Book 18 should be the primary design guidance used for cycling facility design. When the update to OTM Book 18 is released, Town staff should review changes and note potential improvements for existing and proposed infrastructure.

2. Town staff should refer to the design guidelines outlined in section 2.1 when moving forward with the design and implementation of cycling routes.

3. As the cycling network is implemented, Town staff should refer to locations where *potential crossing enhancements* have been identified on **Map 3** and determine whether it is appropriate to implement additional network enhancements.

4. The Town should develop a wayfinding concept and system for existing and proposed cycling facilities and have a policy to apply wayfinding components consistently throughout the Town.

4

Outreach

To create a culture of cycling and active living, the Cycling Strategy is intended to address additional elements to support the proposed routes and facility types. A concerted effort to encourage behavior change, create community awareness and educate residents on proper cycling techniques is essential to supplement the recommended infrastructure and help the Town achieve its long-term vision and aspirations for cycling.

The following sections outline recommended programs and initiatives that could be implemented in Penetanguishene to help to foster the creation of a strong culture of cycling in the Town. The information contained in this section is intended to build upon existing partnerships the Town of Penetanguishene has with its surrounding municipalities and other key agencies that could play a role in the implementation cycling infrastructure and programming. The recommended programs and initiatives are based on best practices and lessons learned from North America where communities have made great strides towards being among the most bicycle friendly jurisdictions in North America.

Section 4.0

4.1. Partners

As the Town proceeds with the implementation of the Cycling Strategy, it is important that support between the Town and local community champions are maintained and that new partnerships are explored and established. Table 7 provides a detailed description on the role of various partners could have in the promotion and outreach of cycling in Penetanguishene.

Table 7 | Suggested Partners for Outreach and Programming

Partners	Roles
Penetanguishene Trails Committee	The Trails Committee has been an effective voice for the development of new trails in the Town, and has helped to establish trail maintenance standards and more effective communications regarding trails with residents of the Town.
OPP – Southern Georgian Bay Detachment	OPP are an important partner in promoting safe road use for all users. Police officers can deliver educational and public awareness messaging, can help with Bike Rodeos and cycling education at schools, and can play a role in sharing information about collisions and citations with Town staff in order to better inform infrastructure decisions.
Simcoe Muskoka District Health Unit (SMDHU)	SMDHU has been an active voice in promoting cycling as a healthy, sustainable form of transportation that can help achieve physical fitness goals in the region for several years. They have informative resources available, have helped to coordinate events and campaigns around the Region and are a good partner for working with schools, youth and seniors. SMDHU have an established relationship with local schools and school boards and are an excellent resource for the community to leverage in the development of School Travel Plans and Active School Travel.
School Boards	Both the public and Catholic school boards in Simcoe County have internal expertise on promoting active school travel. From Walking School buses in the Town of Collingwood to School Travel Planning work being done around the County, the momentum towards more active school travel is building in Simcoe County, and can be brought to Penetanguishene in the near future.

Partners	Roles
Simcoe County	Simcoe County's Tourism department has been a strong supporter of improved active transportation connections in Penetanguishene. In addition to the support from the Tourism department, Simcoe County's Engineering and Planning department is spearheading the significant investment in new cycling infrastructure along County Road 93, and has also been supportive of local investments through the Trails Connecting Communities Fund. County-wide resources like the Cycle Simcoe website educational videos and their Cycling Maps are popular and effective, and can be leveraged locally to increase exposure.
Municipalities of Midland, Tiny and Tay	Much of the work that is identified within this Outreach chapter would be best undertaken with partners from the County. Working with partners in the communities adjoining Penetanguishene would help to bring more awareness and visibility to the activities, create seamless programming across North Simcoe, and would make activities that might be cost prohibitive for one community more cost-effective and attainable.
Rotary Club of Penetanguishene	In several communities across Ontario the local Rotary has been active in many initiatives relating to active transportation. Common initiatives include participating in the development of new trails, hosting events such as bike rodeos, bike swaps or helmet fittings, and participating in safety equipment giveaways (providing lights, helmets and reflectors to vulnerable groups such as migrant workers). The Penetanguishene Rotary would be a great partnership to build as this plan moves into the implementation phase to bring some of these new programs into the community.
Huronia Historical Parks	Ste. Marie Among the Hurons and Discovery Harbour are some of the most popular local destinations in the Penetanguishene area, and can be valuable partners to promote cycling safety. Cycling Day camps, cycling trips between the two parks, expanded bike parking and bike valet during special events when parking usage is expected to be high (for example – during Pumpkinferno at Discovery Harbour) are all ways that the Parks can be engaged in developing a stronger culture of cycling in Penetanguishene.

Section 4.0

4.2. Action Plan

This following section contains 13 actions that have been identified in the immediate (0-2 years) and short term (2-5 years) to create community awareness, demonstrate the benefits of cycling and educate all users on proper techniques. These are intended to form an action plan to help encourage more people to cycle in Penetanguishene.

Action #1: Establish a North Simcoe Cycling Committee

Description	The Town of Penetanguishene is very well connected to its neighbouring municipalities in Midland, Tiny and Tay. Many of the services and economic drivers in the area are located across municipal lines. Establishing a shared committee where lessons and best practices can be shared, and where resources can be pooled to maximize the impact of new programs would help Penetanguishene to build its own cycling culture more quickly. Committee members could be representatives that were engaged as part of the Penetanguishene Cycling Strategy. It is suggested that this committee have sub-committees or working groups focused on different areas (e.g. education, encouragement) to ensure that the broader committee can focus on building partnerships and discussing "big picture" topics.
Timeline	Immediate (0-2 years)
Potential partners	▶ OPP ▶ Local committee representatives ▶ Municipal staff ▶ Rotary clubs / local organizations ▶ Local businesses / BIAs ▶ Council representatives ▶ Local Bike Shops ▶ Simcoe Muskoka District Health Unit ▶ YMCA Midland Representatives ▶ School Boards and School representatives
Best practices	Essex County CWATS Committee (here) Pelham Active Transportation Committee (here)
Key outcomes	1. Develop Terms of Reference to guide future efforts and membership (Summer 2020) 2. Convene committee (Summer 2020) 3. Identify a process to request for annual budget from involved municipalities to allow the committee to run events, pay for the delivery of promotional services and to make small investments e.g. bike racks
Estimated budget	$5,000 per year to produce public awareness campaign materials and purchase advertising space to promote the message

Action #2: Cycling Instructor Training Fund

Description	In order to deliver high-quality cycling education, it is recommended that the Town invest in training for new cycling instructors for the first 2 years of this plan. By training certified instructors, the Town will ensure that courses are taught in a consistent fashion that meets existing cycling education standards. In order to deliver cycling education throughout the community, it is recommended that the Town invest in **2 cycling instructor** training courses within the first 2 years of this plan, training up to a maximum of 12 instructors. Having a large instructor pool will provide the Town with the option to run new cycling education programming into the future, and is an investment in the long-term sustainability of the Town's educational efforts. In order to be able to deliver cycling education in an effective manner to a variety of audiences in the Community, it is recommended that the town focus on training at least one instructor from the following groups: ▶ Women ▶ School teachers ▶ Bilingual residents ▶ Huronia Historical Parks (HHP) Staff ▶ Seniors ▶ OPP Officers ▶ Town Parks and Recreation Staff By having each of these groups represented in the pool of certified instructors, the Town increases the likelihood that the various communities represented within Penetanguishene can find a cycling course that is being taught by someone that they can relate to.
Timeline	Immediate (0-2 years)
Potential partners	▶ Parks and Recreation Staff ▶ Community Groups ▶ Schools ▶ OPP
Best practices	Thunder Bay's Safe Cycling Thunder Bay Program here
Key outcomes	1. CAN-Bike Level 4 taught in late 2019 2. CAN-Bike Instructor Training taught in 2020 and 2021 3. Six to twelve certified CAN-Bike Instructors available in Penetanguishene by the end of 2021
Estimated budget	$4,500 per year in years 1 and 2

Section 4.0

Action #3: Work with partners to undertake and host bike rodeos for specific events

Description	Bike rodeos are a great opportunity for local officers and partners to educate youth about riding safely and legally. With a small number of elementary schools, Penetanguishene is fortunate to be in the position where every student in Town could receive cycling education through bike rodeos for a relatively small investment. Bike rodeos can be undertaken to compliment other initiatives including Active School Travel plans to encourage more youth to engage in active forms of travel and bike to / from school.
Timeline	Immediate (0-2 years)
Potential partners	▶ School Boards and School representatives ▶ OPP ▶ Simcoe Muskoka District Health Unit
Best practices	City of Waterloo – Cycling into the Future here Lanark County OPP Bike Rodeo here
Key outcomes	1. Bike rodeos at all elementary schools beginning in the 2020-2021 school year
Estimated budget	$2,000 annually for instructors and materials

Action #4: Identify Town facilities that can be enhanced as 'bike hubs'

Description	A recent trend across North America is the utilization of existing public assets – like libraries, community centres and more, as Cycling Hubs. Existing Town facilities such as the Penetanguishene Library would be well suited to serve as a learning centre where residents could gain experiences and skills necessary to be a more confident cyclist. The library could serve as a place where: ▶ People could go for free safety equipment like lights or bells for their bikes; ▶ Cycling maintenance courses could be taught on a regular basis; ▶ Cycling and trails maps are readily available; and ▶ There are weekly drop-in hours where Town staff are in attendance and visitors can find out about the community's investments, new updates and discuss their concerns.
Timeline	Immediate (0-2 years)
Potential partners	▶ Town staff ▶ Local businesses ▶ Simcoe Muskoka District Health Unit ▶ Simcoe County
Best practices	City of Toronto, Scarborough Bike Hub here
Key outcomes	1. Cycling Safety Equipment available at the library in 2020 2. Drop-in hours and courses beginning in 2020
Estimated budget	$1,500 per year for supplies, including lights, bells, educational and marketing materials for bike maintenance clinics

Section 4.0

Action #5: Develop Active School Travel plans for schools in Penetanguishene

Description	Communities across the Province have experienced success and increased levels of physical activity by promoting Active School Travel plans. Best practices and lessons learned from other municipal school travel programs indicate that success is largely attributed to available staff resources to liaise with schools, deliver programming and provide support to deliver events. The Town of Penetanguishene should work with Midland, Tiny and Tay to hire a School Travel Planning (STP) Facilitator to perform School Travel Planning work with schools all throughout the region. Several organizations in Penetanguishene, including the OPP and SMDHU, have existing relationships within schools, and are in frequent contact with staff for a variety of programs and events. These partnerships could be expanded to include more emphasis on cycling education in schools. Other suggested activities for encouraging more active school travel in Penetanguishene include: ▶ Installing Bike Repair stations at schools in Penetanguishene ▶ Hosting Trips for Kids events taking students on mountain bike trips ▶ Providing support for after-school bike clubs ▶ Supporting and leading biking and walking school buses
Timeline	Immediate (0-2 years)
Potential partners	▶ Trails Committee ▶ OPP ▶ Simcoe Muskoka District Health Unit ▶ School Boards and School representatives
Best practices	Metrolinx Stepping It Up pilot program (here) Town of Ajax Active Safe Routes to School (here)
Key outcomes	1. STP Facilitator hired in time to start work during 2020-2021 School year 2. School Travel Planning underway at 2-3 schools in Penetanguishene (in addition to 2-5 schools in Midland, Tiny and Tay) by the end of 2021
Estimated Budget	$50,000 per year plus benefits for STP Facilitator, split between the 4 local municipalities with contributions from school boards and SMDHU complementing municipal resources. ▶ $12,500 per year from Penetanguishene, contingent on funding commitments from other partners

Action #6: Undertake Bike Month celebrations

Description	As this plan moves forward, hosting a Bike Month in Penetanguishene is a great way to bring cycling to a much larger audience. Expanding the number of events and programs offered during one single month can help to create a conversation about cycling in the community and can provide the push for people to get on their bikes. Maximizing the number of events during Bike Month can help target the "Interested but Concerned" cyclists in Penetanguishene, and can build a strong sense of community around cycling. Consider partnering with partners at the Simcoe Muskoka District Health Unit, the local Rotary Club, local bike shops or interested local businesses to offer weekly guided bike tours around Penetanguishene during Bike Month, and expand the offerings of events to ensure that June is a month-long celebration of cycling in Penetanguishene. Consider hosting one larger event in conjunction with the Town of Midland to either kick off or wrap up Bike Month – potentially a Dock-to-Dock cycling event that starts and ends at the Dock areas in each town to bring riders together to celebrate the great cycling environment that both Towns have to offer.
Timeline	Immediate (0-2 years)
Potential partners	▶ Trails Committee ▶ Rotary Club and local organizations ▶ Simcoe Muskoka District Health Unit ▶ Town of Midland ▶ Local Bike Shops ▶ Local businesses
Best practices	City of Ottawa – Bike to Work Month here
Key outcomes	1. Begin planning Bike Month 2020 in late 2019 2. Bike Month 2020 takes place in June 2020 with at least 4 events throughout the month
Estimated Budget	$3,000 for promotional materials, event expenses, prizes and more

Section 4.0

Action #7: Undertake an inventory of bike parking and purchase bike racks

Description	A significant gap identified by the public during the study process was the lack of available and secure bike parking facilities in the Town. As such, it is important to establish an inventory of the existing bike parking to identify gaps and areas where bike parking could benefit the community. By purchasing bike racks in bulk, the Town can offer wholesale pricing to partners and work with businesses to supply safe, secure bike parking at their location. Due to Penetanguishene's size and geography, the number of new bike parking spaces that would be required to ensure that the entire Town is well-covered by bike parking is fairly low – adding capacity for 20 to 50 bikes per year would have a significant impact.
Timeline	Immediate (0-2 years)
Potential partners	► Town staff ► Local businesses ► Bike supplier(s)
Best practices	Oakville – Downtown Bike Corrals here Thunder Bay – Bike Rack Program here
Key outcomes	1. Bike parking inventory completed in 2020 2. Bike racks sourced and purchased in 2020 3. Racks resold to businesses or donated by the town to employers in 2020-2021 4. All racks installed by end of 2021
Estimated Budget	Budget of up to $8,000 (assumes 10 five-ring bike racks) to be ordered by the Town and re-sold to businesses and partners at cost. ► Single inverted u-bike racks – $200 each ► Five-ring bike racks – $800 each

Action #8: Expand education and awareness about the 1 metre safe passing law

Description	Instituted in 2015, Ontario's Highway Traffic Act now requires motorists to provide 1 metre of space between their vehicle and a person on a bike when passing. The implications of this law are still not fully understood by many people who drive or bike in Ontario, and municipalities and police departments both have a role to play in ensuring that people have a better understanding of the requirements under the law.
Timeline	Immediate (0-2 years)
Potential partners	▶ OPP ▶ Trails Committee
Best practices	Peterborough County – A Metre Matters campaign here Ottawa Police Service – Sonar electronic device here
Key outcomes	1. 1 metre safe passing messaging delivered in Penetanguishene in 2020 and 2021
Estimated Budget	$500 annually for printing informational materials and running social media ads with existing campaigns

Section 4.0

Action #9: Cycling and walking Distance Maps

Description	Due to Penetanguishene's size and geography, most trips made in Town are considered to be 15 minutes or less by bike. A key challenge of promoting cycling is the perception that accessing a destination by bike will take much longer than it actually does. This perception can be altered by promoting the fact that a large portion of Penetanguishene is within a 5, 10 and 15 minute bike ride of popular destinations like the downtown core, Penetanguishene Memorial Arena, Discovery Harbour, both locations of the Georgian Bay General Hospital or Downtown Midland.
Timeline	Immediate (0-2 years)
Potential partners	▶ Trails Committee, ▶ Local businesses ▶ Rotary club and local organizations
Best practices	Every Metre Counts – "It's Closer Than You Think" map here
Key outcomes	1. Maps of popular destinations produced and distributed in 2020
Estimated Budget	$500 for graphic design and production of print materials

Action #10: Bike and Trail Safety Equipment Giveaways

Description	A common concern among all road and trail users is the lack of visibility of people walking and cycling in the dark. Lights and bells on bikes are required under the Highway Traffic Act, but many riders still do not have a working light or bell on their bike. Consider having volunteers and Penetanguishene OPP officers engage in an educational campaign to both promote the fact that lights and bells are required on bikes and to hand out lights, bells and reflectors to people walking and cycling who don't have those items to keep them safer on the roads and trails.
Timeline	Immediate (0-2 years)
Potential partners	▶ Trails Committee ▶ OPP ▶ Local Bike Shops
Best practices	City of Ottawa - Lights on Bikes here City of Thunder Bay – Light the Night here
Key outcomes	1. Lights, bells and other safety equipment available for distribution in summer 2020
Estimated Budget	$1,000 annually for promotional materials

Section 4.0

Action #11: Undertake Open Streets events

Description	Open Streets Events are excellent tools to promote and introduce active transportation and cycling to the Interested but Concerned user group. Using an Open Streets event to promote and celebrate that infrastructure is an effective way to build community support for cycling projects, and to introduce residents to the ease of travelling in the area by bike. The Town of Penetanguishene and the Town of Midland may consider hosting an Open Streets Event once the in-boulevard multi-use path along County Road 93 is completed. The communities could host a shared Open Streets day, closing roads leading from the County Road 93 to the downtown cores (e.g. Main Street in Penetanguishene and Yonge Street in Midland) with the pathway serving as the active connection between the two hubs.
Timeline	Short term (2-5 years)
Potential partners	▶ Trails Committee ▶ Local businesses ▶ Rotary club and local organizations ▶ OPP ▶ Town of Midland ▶ Simcoe County
Best practices	City of Hamilton – Open Streets here Peterborough Pulse – Open Streets here
Key outcomes	1. Host one Open Streets event each year starting in 2021 or 2022
Estimated Budget	$5,000 for organization and event related expenses

Action #12: Host bike valet services at special events

Description	Bike Valet services are akin to coat check services at entertainment venues. At a valet service, cyclists arrive to check-in their bike in to a secure storage facility, receive a number and then present that number to check-out their bike at the end of the event. The Town could host bike valet services at specific events such as the local Farmers' Market, potentially staffing it with interested residents and representatives from local organizations. This would provide cyclists with a safe place to lock their bike while at community events and providing an opportunity for Town representatives to talk with riders about their cycling experience in the Town The Town could also consider integrating bike valet into the special events permitting process to ensure that all special events in Penetanguishene include provisions for bike valet. This could be accompanied by a small fee for event organizers to pay for staffing at the bike valet, and could help the community make bike valet a more reliable element of special events in Town. There may also be an opportunity for the Town to partner with surrounding municipalities to share the costs of investing in Bike Valet materials so that the service can be more widely available to all the communities in the area on a more frequent basis.
Timeline	Short term (2-5 years)
Potential partners	► Trails Committee ► Local businesses ► Rotary club and local organizations ► Surrounding municipalities
Best practices	Cycle Toronto bike valet services (here) Town of Oakville bike valet services (here)
Key outcomes	1. Bike Valet available at 20 events per year (including weekly farmers' markets) beginning in 2021
Estimated Budget	$2,500 to purchase bike valet materials (a significant amount of this budget is used to purchase racks or equipment associated with bike storage and will not need to be purchased on an annual basis)

Section 4.0

Action #13: Organize a Community Cycling Challenge

Description	There are a variety of different methods of collecting data about ridership that could be used (Strava, Ride, Map My Ride, etc.), and there are a growing number of platforms that allow residents to input their kilometers ridden to help the community track their progress. A recent success story comes from the Halton Hills Community Cycling Challenge, which raised more than $300,000 for the Georgetown Hospital Foundation over the 5 years. Donations were made by businesses, but were contingent upon the community reaching an increasing goal of total kilometers cycled during each season. The Challenge brought the community together towards a common goal, and a is a potential model for Penetanguishene. Consider launching a Bike Challenge once more cycling infrastructure is implemented to support attractive and comfortable cycling and using the challenge as an opportunity to engage with residents who may not otherwise choose to ride a bike. This can be a great way to build more support for cycling within the community.
Timeline	Short term (2-5 years)
Potential partners	▶ Trails Committee ▶ Local businesses ▶ Rotary club and local organizations ▶ Surrounding municipalities
Best practices	Town of Halton Hills – Community Cycling Challenge here
Key outcomes	1. Launch the first iteration of the cycling challenge in 2021
Estimated Budget	$5,000 for promotion, website set up costs and a donation to the Hospital Foundation

4.3. Supporting and Implementing the Action Plan

As the demand for cycling continues to grow, consideration should be given to increase resources and budget to support the proposed action items identified in section 4.2. The proposed outreach recommendations are intended to supplement infrastructure improvements by providing tactics that enhance Penetanguishene as a destination for cycling for residents and visitors. In total, there are 13 potential outreach actions identified in this strategy.

A key component of implementing this Action Plan is the provision of staffing resources to ensure that relationships between stakeholders are developed and maintained, outreach programs are well-organized and regularly hosted and that outreach projects are delivered in a timely, budget conscious manner. As a result, this plan recommends the creation of an Active Transportation Coordinator staff position as a part-time contract position in the Town. The addition of a 500-hour Active Transportation Coordinator contract from March until October to the Town's staffing, would contribute significantly to the development of a stronger culture of cycling in the Town. A similar position was created, with substantial success, in the Town of Saugeen Shores in 2018, and has since been identified as an important role to fill every year moving forward. The job description for the Town of Saugeen Shores Cycling Coordinator is included in **Technical Appendix D**.

The following tables outline proposed budgets for years 1-4 of the implementation of this Action Plan. The expenses are identified in order of importance and significance. If annual budget constraints require a reduction in funding for the proposed implementation of this Action Plan, projects identified at the bottom of each table could be deferred to future years.

The total budget of the proposed Action Plan is **$169,000** over 4 years – an average of $42,250 per year. This includes funding for staff to deliver new cycling programs, a significant increase in capacity to deliver effective cycling education, an increase in the number of bike parking spots in the Town and an on-going commitment to supporting Active School Travel in Penetanguishene. A summary of the estimated costs, broken down annually from years 1-4, are provided in **Tables 7-10** below. Each suggested outreach action is ranked in order of highest priority to lowest.

As municipal planning documents are typically updated every 5-10 years, it is recommended that during year 5 of the Cycling Strategy's implementation (or when the strategy is next updated), that Town staff review the outreach initiatives identified in section 4.2 to develop annual action plans for the following 4 years. These action plans should contain initiatives that are shaped by lessons learned, successes and best practices, the needs of the community at that time and the culture of cycling in Penetanguishene.

Section 4.0

Table 8 | Summary of Suggested Outreach Actions and Budget for Year 1

	Suggested Action	Budget
1.	Active Transportation Coordinator	$12,000
2.	Programming and promotions budget for North Simcoe Cycling Committee	$3,000
3.	Cycling Instructor Training	$4,500
4.	Work with partners to undertake and host bike rodeos for specific events	$1,000
5.	Undertake Bike Month Celebrations	$3,000
6.	Identify Town facilities that can be enhanced as 'bike hubs'	$1,500
7.	Undertake an inventory of bike parking and purchase bike racks	$8,000
8.	Expand education and awareness about the 1 metre safe passing law	$500
9.	Cycling and walking distance maps	$500
10.	Bike and Trail Safety Equipment Giveaways	$1,000
	Total	**$35,000**

Table 9 | Summary of Suggested Outreach Actions and Budget for Year 2

	Suggested Action	Budget
1.	Active Transportation Coordinator	$12,000
1.	Programming and promotions budget for North Simcoe Cycling Committee	$5,000
2.	Cycling Instructor Training	$4,500
3.	Work with partners to undertake and host bike rodeos for specific events	$2,000
4.	Undertake Bike Month Celebrations	$3,000
5.	Continued funding for support for Bike Hubs – promotional materials etc	$1,000
6.	Develop Active School Travel plans for schools in Penetanguishene	$12,500
7.	Expand education and awareness about the 1 metre safe passing law	$500
8.	Bike and Trail Safety Equipment Giveaways	$1,000
	Total	**$41,500**

Table 10 | Summary of Suggested Outreach Actions and Budget for Year 3

	Suggested Action	Budget
2.	Active Transportation Coordinator	$12,000
3.	Programming and promotions budget for North Simcoe Cycling Committee	$5,000
4.	Work with partners to undertake and host bike rodeos for specific events	$2,000
5.	Undertake Bike Month Celebrations	$3,000
6.	Continued funding for support for Bike Hubs – promotional materials etc	$1,500
7.	Develop Active School Travel plans for schools in Penetanguishene	$12,500
8.	Expand education and awareness about the 1 metre safe passing law	$500
9.	Bike and Trail Safety Equipment Giveaways	$1000
10.	Undertake Open Streets events	$5,000
11.	Purchase Bike Valet materials and host bike valet services at community events	$2,500
	Total	**$45,000**

Table 11 | Summary of Suggested Outreach Actions and Budget for Year 4

	Suggested Action	Budget
1.	Active Transportation Coordinator	$12,000
2.	Programming and promotions budget for North Simcoe Cycling Committee	$5,000
3.	Work with partners to undertake and host bike rodeos for specific events	$2,000
4.	Continued funding for support for Bike Hubs – promotional materials etc	$1,500
5.	Develop Active School Travel plans for schools in Penetanguishene	$12,500
6.	Undertake Bike Month celebrations	$3,000
7.	Bike and Trail Safety Equipment Giveaways	$1000
8.	Undertake Open Streets events	$5,000
9.	Host bike valet services at special events	$500
10.	Organize a Community Cycling Challenge	$5,000
	Total	**$47,500**

Section 4.0

Outreach Recommendations

1. The Town should consider establishing an Active Transportation Coordinator part-time position and hire one (1) staff from March to October to fill this role (on an annual basis) to help plan, coordinate and deliver the recommended outreach initiatives and yearly action plans identified in Chapter 4 of the Cycling Strategy.

2. Town staff should review and consider undertaking the yearly action plans identified in Table 7, Table 8, Table 9 and Table 10 to encourage behavior change, create community awareness, educate residents on proper cycling techniques and create a strong culture of cycling in Penetanguishene.

3. During year 5 of the Cycling Strategy implementation (or when the strategy is next updated), Town staff should review and refine action plans for the following four years and identify outreach initiatives that are shaped by lessons learned, successes and best practices, the needs of the community at that time and the culture of cycling in Penetanguishene

5

Implementation

To achieve the Town of Penetanguishene's long-term vision and aspirations for cycling, significant financial investment and supportive resources will be needed to begin achieving implementation in the short term. The strategies and recommendations developed as part of the Town's Cycling Strategy are intended to inform day-to-day decision making to support of cycling beyond the lifespan on the plan.

The following sections provide the Town with a realistic implementation strategy to inform future decision making, policy and planning processes. The following sections identify the proposed phasing plan, supportive implementation tools, promotional tactics, maintenance considerations and costing to help guide the Town's next steps.

Though the following implementation plan outlines a phasing strategy for the next twenty (20) years, the focus of the Cycling Strategy will be in the short and medium term – within the first ten (10) years. Since municipal planning documents are typically updated every five to ten years, it is recognized that projects beyond this horizon may change over time. Town staff are encouraged to use the information and tools contained in this section to guide implementation to achieve the long-term vision and aspirations for cycling in Penetanguishene.

Section 5.0

5.1. Strategy Phasing

The proposed network phasing for the Town's cycling network is organized into three phases over a 20-year horizon:

short term	medium term	long term
1-5 years	**5-10 years**	**10-20 years**

The proposed phasing plan is intended to be flexible and guide future decision making to improve cycling conditions and opportunities in Penetanguishene. The proposed phasing plan is not a commitment to monies; it is meant to be used by Town staff and Council to inform how cycling projects can be implemented and funded over time.

Map 4 illustrates the proposed phasing of cycling routes. An overview of the proposed phasing plan is provided in **Table 12.**

Table 12 | Summary of Proposed Phasing for the Cycling Network

Facility Type	Short term 1-5 years	Medium term 6-10 years	Long term 10-20 years	Total KM
Off-road trail	0.5	0.5	1.5	2.6
In-boulevard multi-use path[1]	0.6	0	0	0.6
Buffered paved shoulder	2.9	1.0	1.7	5.5
Paved shoulder	2.1	3.2	0	5.3
Signed route	8.4	1.4	2.2	12.0
Total	**14.4**	**6.1**	**5.4**	**25.9**

Note:

1. The proposed in-boulevard multi-use path is located along a County owned road (County Road 93) from the Town boundary to Thompson Road.

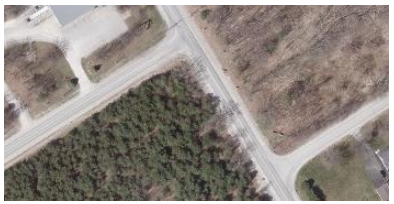
The proposed phasing plan is intended to be flexible and guide future decision making to improve cycling conditions and opportunities in Penetanguishene. The proposed phasing plan is not a commitment to monies; it is meant to be used by Town staff and Council to inform how cycling projects can be implemented and funded over time.

In addition to the proposed phasing of cycling routes, **Map 4** illustrates the suggested implementation horizon for each potential network enhancement. The proposed implementation of these enhancements is intended to be consistent with planned projects identified in the Town's capital plan and reflect input received from Town staff, stakeholders and members of the public. **Table 13** provides an overview of the suggested implementation horizons for each location where a network enhancement is proposed

Table 13 | Summary of Proposed Network Enhancement Phasing

Location of Proposed Network Enhancement		Proposed Phase
	Trans Canada Trail crossing at Robert Street West and Centre Street	Short term 1-5 years
	Robert Street East and Fox Street	Long term 10-20 years
	Trans Canada Trail crossing at Beck Boulevard and Fox Street	Medium term 6-10 years
	Crossing of proposed off road trail at Robert Street West to Park Street	Short term 1-5 years

Section 5.0

Location of Proposed Network Enhancement		Proposed Phase
	Trans Canada Trail at Overhead Bridge Road	Medium term 6-10 years
	Robert Street and Main Street	Short term 1-5 years
	Robert Street East and Fuller Avenue	Short term 1-5 years

As the Town moves forward with implementing the preferred cycling network, it is recommended that staff refer to network enhancements identified in **Maps 3** and **4** to determine the appropriateness of a design enhancement at a particular location. It is further recommended that the specific design and application of enhancements be assessed and confirmed through future detailed studies in consultation with stakeholders and members of the public.

The proposed phasing for the Town's cycling network was based on a number of factors that reflect the Town's current processes and protocols. Combined, these factors are intended to inform the development of a phasing plan that is achievable and realistic for the Town of Penetanguishene. The factors that were assessed to inform the proposed phasing plan are highlighted in **Figure 25**.

capital projects
potential to coordinate cycling projects with other planned roadway and / or infrastructure improvements identified in the Town's annual capital plan

secondary plan areas
potential to coordinate construction of on-road cycling routes in conjunction with future planned roads, and identify off-road connections through parks / natural spaces

town input
priorities and preference expressed by Town staff during the study development process

stakeholder and resident input
timelines and preferences provided by residents and stakeholder through consultation and engagement activities

Figure 25 | Cycling Strategy Phasing Considerations

It is recommended the phasing plan be updated on an annual basis to ensure that the proposed routes, facilities and network enhancements are based on available budgets and where possible, leverage other planned capital projects.

Section 5.0

5.2. Implementation Strategy

5.2.1. Implementation Process

There are a number of common steps in Provincial planning and design best practices to move from a master planning stage through to design and implementation. When proceeding from the master plan to detailed design, next steps may include environmental assessment planning and capital budget processes. **Figure 26** illustrates this process. It is based on the step-by-step process outlined in section 6.1 of OTM Book 18.

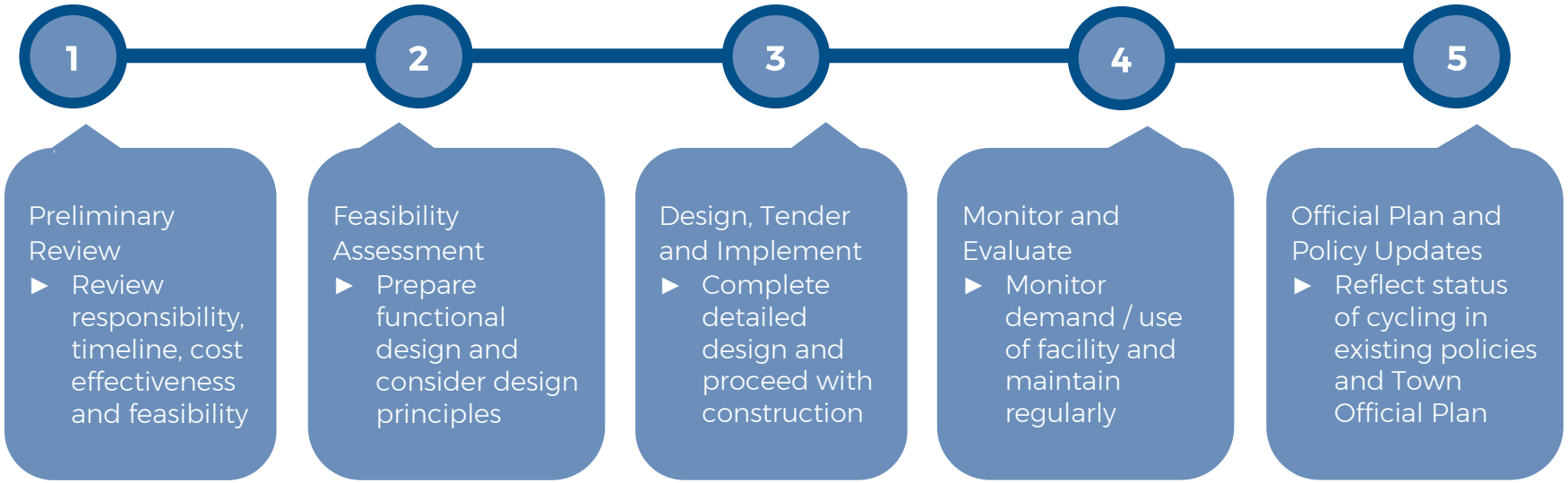


Figure 26 | Cycling Strategy Implementation Process

5.2.2. Roles & Responsibilities

Implementation of the recommendations and strategies contained in the Cycling Strategy will require on-going coordination between Town staff and its partners. It is important to establish a clear understanding of who will do what – a framework of how different Town departments and stakeholders could contribute to various elements of the Cycling Strategy. Table 14 outlines primary and secondary partners that are anticipated to have a role in implementing the Town of Penetanguishene's Cycling Strategy.

Table 14 | Suggested Partners and Roles

	Who are they?	How can they help?
primary partner	▶ Staff from Town departments including: ▪ Recreation and Community Services ▪ Public Works ▪ Planning and Community Development ▪ Finance Services ▪ Corporate Services ▶ Surrounding municipal staff ▶ Simcoe County	Primary partners can provide input on projects that impacts lands and roads under their jurisdiction. Primary partners typically have a direct role in the planning, design and implementation of "hard" elements of the Cycling Strategy including routes / facility types and other supportive infrastructure.
secondary partner	▶ Committees of the Council including: ▪ Accessibility Advisory Committee ▪ Trails Committee ▶ Active Transportation Coordinator part-time contract position (refer to section 4.3 for details) ▶ Simcoe Muskoka District Health Unit ▶ Tourism Simcoe County ▶ Regional Tourism Organization (RTO) 7: Bruce Grey Simcoe ▶ School Boards ▶ OPP – Southern Georgian Bay Detachment ▶ Local businesses ▶ Indigenuous Communities ▶ Cycling clubs and organizations ▶ Residents	Secondary partners typically support primary partners related to the implementation of routes / facilities and supportive infrastructure. Primary partners typically have a direct role in the planning and implementation of "soft" elements of the Cycling Strategy including outreach programs and promotional initiatives.

Section 5.0

5.3. Supporting Implementation

Implementation of the Town of Penetanguishene's Cycling Strategy will require "tools" to support the future decision-making and planning. If developed appropriately, tools can be used by a wide range of Town staff and stakeholders to streamline processes and to ensure that communication is clear and consistent. There are five types of tools that have been identified for the Town of Penetanguishene to support the implementation of the Cycling Strategy. A brief description of each is provided below:

section **5.3.1**

policy considerations

A set of policy considerations which help to facilitate change towards cycling supportive planning and design in Penetanguishene.

section **5.3.2**

risk management and liability

Considerations to mitigate risk and liability issues when designing, implementing and maintaining cycling facilities.

section **5.3.3**

operations and maintenance

Maintenance considerations and practices for both seasonal and year-round use of routes and facilities.

section **5.3.4**

monitoring and evaluation

Proposed methods for documenting and evaluating the implementation and success of both infrastructure as well as programming initiatives.

section **5.3.5**

supportive tools

Tools which are intended to support the implementation of the network specifically including communication tools as well as internal management.

5.3.1. Policy Considerations

Policies form the supportive framework to enable change and influence the planning, design and implementation of cycling supportive infrastructure in the Town. Based on emerging trends and best practices, a number of policy considerations are provided below to help shape the future of cycling in Penetanguishene.

establish a link with municipal policies and processes

The development of the Cycling Strategy is the first step towards purposeful investment in cycling infrastructure. However, the strategy does not commit the Town or partners to action and develop infrastructure. The foundation of cycling development on the Town depends on strong and effective top-down policy that highlights the importance of cycling to the Town. It is suggested that the key components of the Cycling Strategy, such as the network and phasing plan be adopted into municipal planning and policy documents. This would link the strategy to the broader goals of the Town. Furthermore, cycling projects and initiatives should be stated as one of the priorities in the Town's Strategic Plan and be considered for inclusion during the development and update of the capital plan.

plan for infrastructure development and implementation

The goal of the network plan is to construct and operate the facilities indicated in the Cycling Strategy. The strategy should be used to inform municipal staff, especially Finance and Public Works to include cycling infrastructure projects through the yearly budgeting and long-term forecasting exercises. When new developments are proposed, the Town could consider implementing requirements for the developer to provide cycling or active transportation facilities as part of the site development process. Practical policies and actions can help the Town implement cycling routes and corridors highlighted in this plan.

develop programming and outreach initiatives

While cycling infrastructure is important, programs and outreach should not be neglected in terms of budgeting and resources. Through the Cycling Strategy's outreach action plan, a priority should be to establish, encourage and maintain positive partnerships and alliances. While not specific for cycling outreach and programming, further emphasis should be placed to increase cross-municipality communication, collaboration and teamwork to ensure a broad range of initiatives can be delivered on a regular basis.

Section 5.0

data driven decision making

Policy and decision making regarding cycling infrastructure and programs should be data driven. This does not necessarily mean the exclusive use of quantitative data. Through the incorporation of a monitoring program, the Town can better understand who, what, where, when and why residents and visitors choose to cycle. Data collection and analysis should be part of the review process for all municipal departments involved in the implementation process. Data driven decision making may result in improved asset management, event turn-out and land-use planning. The goal of this policy consideration is to use data collection and leverage lessons learned to improve future decisions.

new mobility and regulatory implications

The Town's existing by-laws can be enhanced to address and clarify cycling usage and operations in Penetanguishene. Furthermore, advances in new mobility that changes user's travel habits may need to be addressed through policy. The classification of a power-assisted bicycle in the Traffic / Parking By-law 2012-23 does not conform with Provincial standards, furthermore there is no guidance regarding where power-assisted bicycles are permitted to be used. Consideration should also be given to address e-scooters in conjunction with e-bikes. The MTO has a Frequently Asked Questions page that addresses legal definitions and operations of e-bikes that should be reviewed prior to revised or new policy. It is suggested that the Town evaluate their existing by-law structures to identify gaps as it relates to cycling, and that there be a process to undertake amendments that identify clear provisions for cycling in Penetanguishene. Clarifications and guidance may be incorporated as new or amended by-laws.

e-bikes, alternative vehicles and recreation facilities

New micromobility vehicles such as e-bikes, e-scooters and electric scooters are rapidly entering the market in Ontario and North America. Accessible Recreational Trails should be able to accommodate personal mobility devices such as wheelchairs and medical scooters. The province currently allows municipalities to establish by-laws where e-bikes are permited or prohibited. E-bikes generally operate similarly to a conventional bicycle and are generally regulated in the same manner across many municipalities in Ontario. Prohibition of e-bikes at parks and trails should be done on a case-by-case basis where consultation and risk evaluation should occur prior to making a decision.

development charges

The Town has established By-law 2014-34 to define development charges associated with various types of construction, in particular for new residential or commercial / industrial sites. The funds that are collected are used towards infrastructure improvements associated with new development. This represents an important source of funding for cycling projects associated with growth areas within the Town. Projects that are adjacent to new developments should be considered to be partially funded through development charges and reflected in the budget and capital plans. In addition to the Town's by-law, there are Educational Development charges for the Simcoe County District School Board and the Simcoe Muskoka Catholic District School Board. Through partnerships with the school board, consideration could be given to use some of the funds towards school programming.

Discover Harbour
Photo Source | WSP 2018

5.3.2. Risk Management & Liability

The way that cycling routes are maintained and designed can have a direct influence on liability. On-road cycling facilities are compared to the same liability criteria as roadways which implicates the Town as partially liable if an incident occurs and the facility is not properly designed, constructed or maintained. A bicycle is legally defined as a vehicle in the Highway Traffic Act, which means that routes where cycling is permitted may need to adhere to the same requirements as a roadway / highway. This reaffirms the importance of complying with provincial and national design guidelines and standards as they provide the greatest level of legal protection.

Along with using existing guidelines and standards to mitigate risk and liability issues, the Town should also consider the following when designing, implementing and maintaining active transportation facilities:

- Improving the physical environment, increasing public awareness of the rights and obligations of users, and enhancing access to educational programs;
- Selecting and designing facilities in compliance with the highest prevailing standards;
- Design concepts should comply with all applicable laws and regulations;
- Conforming to acceptable standards, and if hazards cannot be removed, they should be isolated with a barrier or notified by clear warning signs;
- Monitoring of on and off-road facilities through regular patrols and audits, documenting the conditions and operations, and promptly responding as needed;
- Keep written documentation and records of all monitoring maintenance activities;
- Avoid using descriptions such as “safe” or “safer” routes;
- Maintaining proper insurance coverage;
- When considering a new cycling route or modification to the existing system, document the assessment tool used to select the preferred facility;
- Exercise good engineering judgement when applying design guidance during the functional design process;
- Consider using principles outlined in the Centre for Sustainable Transportation’s Child and Youth Friendly Land Use and Transport Planning Guidelines.

5.3.3. Operations and Maintenance

Maintenance of on and off-road active transportation routes should be part of a commitment to provide high-quality routes and facilities to users in Penetanguishene. Maintenance practices vary by municipality and the requirements are typically different for routes found within the road right of way and those found outside of the road right-of-way.

The appropriate maintenance of active transportation facilities can leverage capital investments, support user safety and comfort while also increasing the lifespan of the infrastructure. There are maintenance practices for all seasons including:

- Sweeping;
- Surface repairs;
- Pavement markings & signage;
- Vegetation management;
- Snow clearance / ice control; and
- Drainage improvements and drainage grates.

As the Town's cycling network expands, the maintenance practices and level of service will need to be adapted to address new facilities, expectations of the public and minimum standards. In principle, priority should be given to routes and roads where there is a high volume of automobile and cyclist traffic.

It is important to note that municipalities currently use the Provincial Minimum Maintenance Standards (MMS) to inform maintenance practices, including those for active transportation facilities (found within the road right-of-way). These standards were updated in May 2018. It is recommended that the Town update its on and off-road route maintenance practices (consistent with the MMS) and assess the impact to operating budgets, equipment needs and resources.

In support of cycling facility implementation, the asset management process and plan should be updated. Consideration should be given to update the 2013 Asset Management Plan. Cyclists are considered as vulnerable road users and are more sensitive to road conditions. The maintenance management strategy and level of service changes should reflect the conditions required to support high quality cycling facilities.

To support year-round use of the cycling network, consideration should be given to maintenance costs in order to continue to provide safe and comfortable conditions for on and off-road cycling. Table 15 summarizes typical annual maintenance costs for the cycling network full build out.

Section 5.0

Table 15 | Maintenance Unit Prices and Assumptions

Item	Unit Price	Assumptions
Painted Line Markings	$2.50 / m	Unit price is for a single 100 mm wide painted line marking, therefore assume - $5 / m for both sides of the road. Maintenance cost assumes that painted line markings are fully replaced / renewed on an annual basis.
Cold Plastic Line Markings	$5 / m	Unit price is for a single 100 mm wide cold plastic line marking, therefore $10 / m for both sides of the road. Maintenance cost assumes that plastic line markings are replaced every 5 years (or 20% annually). See calculations below: ▪ $5 / m x 20% = $1 / m
Painted Stencils	$50 / m	Assumes stencils are placed every 75m as per OTM Book 18, therefore 26 stencils / kilometre on both sides of the road (13 stenciles on each side of the road). Maintenance cost assumes 30% of painted stencils will need to be replaced / renewed on an annual basis. This equates to $400 per year. See calculations below: ▪ $50 x 26 = $1,300 ▪ $1,300 x 30% = $400
Cold Plastic Stencils	$ 275 each	Assumes stencils are placed every 75m as per OTM Book 18. 26 signs in 1 kilometre on both sides of the road (13 stencils on each side of the road). Maintenance cost assumes 30%of painted stencils will need to be placed / renewed on an annual basis. This equates to $2,200 per year. See calculations below: ▪ $275 x 26 = $7,150 ▪ $7,150 x 30% = $2,200
Route Signs	$200 each	Assumes 26 signs per kilometre (13 on both sides of the road / route). Maintenance cost assumes 5% of all signs will need to be replaced annually. This equates to $260 annually. See calculations below: ▪ $200 x 26 = $5,200 ▪ $5,200 x 5% = $260
Sweeping Costs	$2400 to $4000 / km	Assumes sweeping frequency of 6 times a year per roadway km (uni-directional, one side of the road).

5.3.4. Monitoring & Evaluation

A monitoring plan is an important component of the Cycling Strategy to assess the implementation of recommendations and evaluate how successful they have been in achieving the overall vision for cycling in Penetanguishene. Establishing measures to assess progress can help Town staff prioritize future projects, rationalize investments and appropriately allocate resources. Research indicates that meaningful performance measures can help to:

- Demonstrate the value of cycling projects to citizens and elected officials;
- Track the success of a cycling program, or facility;
- Inform smarter investments through data-driven measures of success;
- Comply with funding requirements at varying levels of government;
- Produce a better built environment for cycling;
- Provide information to engage a broad set of stakeholders; and
- Capture the value of new and innovative datasets and data collection methods for cycling.

The type of performance measures applied by municipalities can vary depending on desired outcomes and data available. As performance measures become more widely used by municipalities, the need to incorporate them into municipal planning processes becomes more important, especially to help inform the annual budgeting process to leverage increased capital investments that support the implementation of the Cycling Strategy. It is a best practice to link individual performance measures to the objectives of the Cycling Strategy to inform the Town's progress on achieving the cycling vision.

Table 16 outlines performance measures that the Town could consider using to document results of implementing the proposed cycling network. The proposed performance measures are based on best practices and key indicators used by municipalities in Ontario. The first step towards development of the monitoring plan is to identify key stakeholders that are able to collect and compile the performance measures. Town staff are encouraged to track the measures on a yearly basis, and create a report that summarizes the indicators as it relates to the goals and objectives of the Cycling Strategy. This annual report could be used to demonstrate the meaningful improvements in cycling and other associated improvements and to publicly demonstrate return on investment. Through the life cycle of the strategy, the performance measures should be re-evaluated on a regular basis, and the data used to inform future improvements.

Section 5.0

Table 16 | Suggested Performance Measures
Source | Adapted from Fehr and Peers Active Transportation Performance Measures (2015)

Performance Measure	Metric	Indicator	Strategy Objective
Collisions	Number of collisions	#	1
	Traffic volumes	#	1
	85th percentile operating speed	#	1
	Perceived safety	qualitative	1
Public Health	Individual activity levels	#	2
	Time biking per day	#	2
	Air quality index	#	3
	Environmentally conscious design	#	3
Facility Use	User counts	#	1
	Mode split	%	1
	Duration of bike trip	#	1
	Bike trips to school by youth	%	1
Equity / Coverage	Proximity to vulnerable populations	%	3
	Number of major destinations connected	#	3
Network	Number of on-road bike routes added	#	1
	Number of off-road trails added	#	1
Supportive Features	Number of bike parking spots	#	4
	Use of bike parking spots	%	4
	Number of new trail / route signed added	#	1
Investment	Capital allocation on bike projects	#	1
	Grant applications for cycling projects	#	1
Economic Development	Number of cycle tourists	#	2
	Customers by travel mode	%	2
	Revenue by travel mode	#	2
Promotion	Number of campaigns undertaken	#	5
	Creation of cycling specific guides	#	5
	Development of a cycling specific online hub	#	5
Enforcement	Drivers ticketed for unsafe road practices (e.g. 1 metre passing rule)	#	5
	Sidewalk cycling tickets issued	#	5

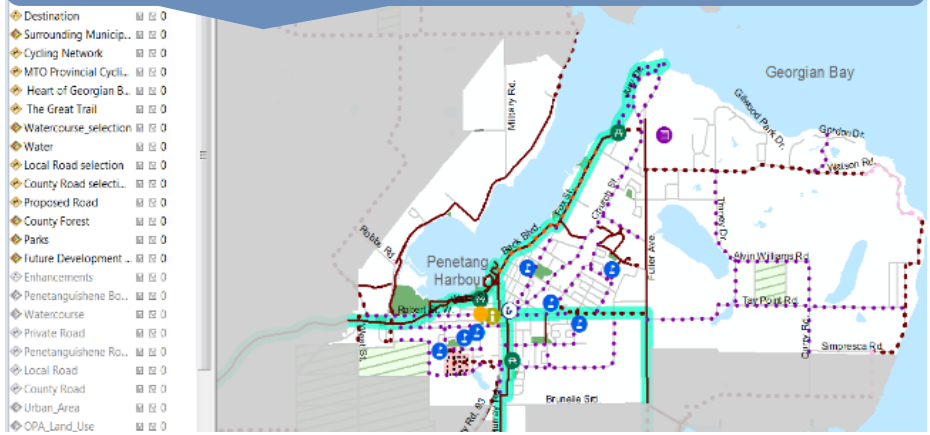
Note: The Strategy Objective numbers refers to the five (5) numbered objectives of the Cycling Strategy outlined in section 1.3 (page 22).

5.3.5. Supportive Tools

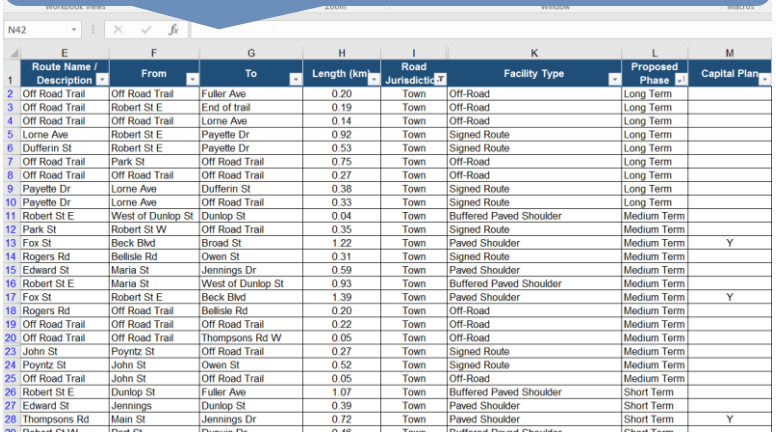
The management of the Cycling Strategy will require on-going coordination and tools to support future development, operations and maintenance. A set of network management tools have been developed that combine two components which together can be used beyond the lifespan of the strategy by Town staff and its partners. The proposed network management tools are summarized in **Figure 27**.

what are they?

geographic information systems (GIS) database



excel based database



	E	F	G	H	I	K	L	M
1	Route Name / Description	From	To	Length (km)	Road Jurisdictic	Facility Type	Proposed Phase	Capital Plan
2	Off Road Trail	Off Road Trail	Fuller Ave	0.20	Town	Off-Road	Long Term	
3	Off Road Trail	Robert St E	End of trail	0.19	Town	Off-Road	Long Term	
4	Off Road Trail	Off Road Trail	Lorne Ave	0.14	Town	Off-Road	Long Term	
5	Lorne Ave	Robert St E	Payette Dr	0.92	Town	Signed Route	Long Term	
6	Dufferin St	Robert St E	Payette Dr	0.53	Town	Signed Route	Long Term	
7	Off Road Trail	Park St	Off Road Trail	0.75	Town	Off-Road	Long Term	
8	Off Road Trail	Off Road Trail	Off Road Trail	0.27	Town	Off-Road	Long Term	
9	Payette Dr	Lorne Ave	Dufferin St	0.38	Town	Signed Route	Long Term	
10	Payette Dr	Lorne Ave	Off Road Trail	0.33	Town	Signed Route	Long Term	
11	Robert St E	West of Dunlop St	Dunlop St	0.04	Town	Buffered Paved Shoulder	Medium Term	
12	Park St	Robert St W	Off Road Trail	0.35	Town	Signed Route	Medium Term	
13	Fox St	Beck Blvd	Broad St	1.22	Town	Paved Shoulder	Medium Term	Y
14	Rogers Rd	Bellisle Rd	Owen St	0.31	Town	Signed Route	Medium Term	
15	Edward St	Maria St	Jennings Dr	0.59	Town	Paved Shoulder	Medium Term	
16	Robert St E	Maria St	West of Dunlop St	0.93	Town	Buffered Paved Shoulder	Medium Term	
17	Fox St	Robert St E	Beck Blvd	1.39	Town	Paved Shoulder	Medium Term	Y
18	Rogers Rd	Off Road Trail	Bellisle Rd	0.20	Town	Off-Road	Medium Term	
19	Off Road Trail	Off Road Trail	Off Road Trail	0.22	Town	Off-Road	Medium Term	
20	Off Road Trail	Off Road Trail	Thompsons Rd W	0.05	Town	Off-Road	Medium Term	
23	John St	Poyntz St	Off Road Trail	0.27	Town	Signed Route	Medium Term	
24	Poyntz St	John St	Owen St	0.52	Town	Signed Route	Medium Term	
25	Off Road Trail	John St	Off Road Trail	0.05	Town	Off-Road	Medium Term	
26	Robert St E	Dunlop St	Fuller Ave	1.07	Town	Buffered Paved Shoulder	Short Term	
27	Edward St	Jennings	Dunlop St	0.39	Town	Paved Shoulder	Short Term	
28	Thompsons Rd	Main St	Jennings Dr	0.72	Town	Paved Shoulder	Short Term	Y

how can they be used?

Town staff are encouraged to use the GIS database to effectively manage Town assets and communicate project outcomes. The database contains spatially referenced data existing routes, proposed routes, facility types and phasing.

The excel spreadsheet is meant to be used as a tool for those who do not have access to GIS software. The spreadsheet should be updated with the GIS database so that the data is consistent and accurate.

Figure 27 | Network Management Tools

Section 5.0

5.4. Infrastructure Costing & Funding

The implementation and construction of the cycling network and supportive activities requires resources – both staff time and funding. Cycling infrastructure can be capitally intensive and should be strategically planned and phased to maximize return on investment. In addition to the proposed phasing timelines, there needs to be supportive strategies that facilitate the funding for the recommendations outlined in the Cycling Strategy. This section describes the approach that was used to develop costing, an overview of the costs and potential sources of funding.

5.4.1. Costing Approach

Implementing the proposed cycling network will require funds and resources from the Town and other partners on an annual basis. Annual funding for construction, maintenance, operations and programming should be identified in the Town's annual budgeting process to strategically implement the active transportation network over time. In addition, the Town should seek additional funding sources to maximize budget efficiencies and coordination with other major projects.

An estimated cost to implement the proposed cycling network has been developed for the Town's consideration and to inform future budgets and decision making. The costing is based on a set of unit prices presented in Technical Appendix E. Select unit prices used to cost the network are highlighted in this appendix and should be used as a reference as projects move from the master planning stage through to detailed design and implementation.

Unit prices have been identified based on best practices from various municipalities throughout southern Ontario and reflect 2019 dollars and are blended rates. It is recognized that the level of effort will vary on a project-by-project basis and some projects could require additional work compared to other projects included in cost estimates. The unit prices are:

- Intended to be used for functional design purposes as they only include the installation of facilities and do not include contingency, design and approvals costs;
- Do not include the cost of property acquisitions, signal modifications, utility relocations, major roadside draining works, or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and stairways, unless otherwise noted;
- Assume typical environmental conditions and topography; and
- Do not include applicable taxes and permit fees – which are considered additional.

5.4.2. Costing Overview

The estimated cost to implement Penetanguishene's local cycling network is approximately $3.3 million over 20 years. A summary of the estimated costs is presented in **Table 17.**

Table 17 | Summary of Proposed Cost by Phase for the Cycling Network

Facility Type	Short term 1-5 years	Medium term 6-10 years	Long term 10-20 years	Total KM
Off-road trail	$ 198,300	$ 210,600	$ 619,800	**$ 1,028,700**
In-boulevard multi-use path[1]	$ 100,000	-	-	**$ 100,000**
Buffered paved shoulder	$ 718,300	$ 242,500	$ 414,900	**$ 1,375,700**
Paved shoulder	$ 310,700	$ 479,200	-	**$ 789,900**
Signed route	$ 25,200	$ 4,400	$ 6,500	**$ 36,100**
Total	**$ 1,352,500**	**$ 936,700**	**$ 1,041,200**	**$ 3,330,400**

Note:

1. The Town of Penetanguishene is contributing $100,000 to the County Road 93 in-boulevard multi-use path, however the County will remain the primary funder of this project.

The costing does not include contingency, design and approval costs. The total estimated investment can be reasonably lowered if the Town can leverage future capital plans and achieve economies of scale by implementing cycling facilities in conjunction with other infrastructure projects. External partnerships could be pursued to spread costs among stakeholders. It is important to note that aligning the phasing plan with capital works to solely reduce costs is not sufficient to develop a high-quality cycling network. If a critical cycling link is missing, it may need to be budgeted and included in the capital plan for implementation to achieve the desired connectivity and level of service for the network.

Detailed costing information is contained in **Technical Appendix E**. It is recommended that this appendix be used as a tool by Town staff to track the progress of implementation of the network and to inform future budgeting and decision making. Though the preliminary costing is meant to inform future decision making, the phasing and costing is not meant to be prescriptive.

As part of annual budgeting processes and to supplement cycling infrastructure in Penetanguishene, it is recommended that the Town also consider allocating funding to support the delivery of outreach initiatives proposed in the actions in Chapter 4 of the Strategy, including the creation of an Active Transportation Coordinator part-time contract position.

5.4.3. Potential Sources of Funding

Table 18 highlights potential external funding sources that could be explored to support the implementation of the Cycling Strategy. The funding programs highlighted were available at the time the Cycling Strategy was prepared, however, they are subject to change, therefore potential funding programs should be monitored regularly. It is important for the Town to seek a diverse range of funding sources for the various initiatives and programs highlighted in this strategy. External funding is an effective way to reduce the Town's costs and can be an opportunity to find and develop new partners for the implementation of this strategy.

Table 18 | Potential Funding Opportunities

Funding opportunities	Additional details
Ontario Cycling Strategy Funding	For additional details regarding the #CycleON strategy refer to: http://www.mto.gov.on.ca/english/publications/ontario-cycling-strategy.shtml http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR017150
Federal / Provincial Gas Tax	For the federal program please refer to: https://www.infrastructure.gc.ca/plan/gtf-fte-eng.html For the provincial program refer to: http://www.mto.gov.on.ca/english/service-commitment/gas-tax-program.shtml
Transport Canada's MOST (Moving on Sustainable Transportation)	For details on the MOST program and the projects that fall in-line with their funding alternatives refer to: http://data.tc.gc.ca/archive/eng/programs/environment-most-menu-711.htm
ecoMobility (TDM) Grant Program	For details on the ecoMobility Grant Program refer to: http://data.tc.gc.ca/archive/eng/programs/environment-ecomobility-menu-eng-144.htm
Federation of Canadian Municipalities Green Municipal Fund	For additional details regarding the Green Municipal Fund and potential funding alternatives refer to: https://fcm.ca/home/programs/green-municipal-fund.htm
Healthy Communities Fund	For additional details regarding the Healthy Communities Fund refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR006918

Funding opportunities	Additional details
Federal and Provincial Infrastructure / Stimulus Programs	For Federal Government infrastructure stimulus fund details refer to: https://www.canada.ca/en/office-infrastructure.html For Provincial Government infrastructure stimulus fund details refer to: https://www.ontario.ca/page/ministry-infrastructure
Ontario Trillium Foundation	For details regarding potential funding alternatives refer to: https://otf.ca/
Ontario Rural Economic Development Program	For details refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR006918
Ontario Sport and Recreation Communities Fund	As part of the Ontario Sport and Recreation Communities Fund: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR006918
Tourism Development Fund	For additional details regarding the Tourism Development fund refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/OSAPQA005130
Service Club Support	Lions, Rotary and Optimist clubs who often assist with highly visible projects at the community level.
Corporate Environmental Funds (e.g. Shell, TD, MEC, etc.)	For example refer to: https://www.shell.ca/en_ca/sustainability/communities/funding-guidelines-process.html for Shell Canada's Social Investment Program or https://www.td.com/corporate-responsibility/fef-grant.jsp for TD's Friends of the Environment Foundation Grant
Private Citizen Donation / Bequeaths	Can also include tax receipts for donors where appropriate.

Section 5.0

Implementation Recommendations

1. The Town should adopt the proposed network phasing illustrated on **Map 4** of the Cycling Strategy.

2. As part of the annual budgeting process, Town staff should incorporate funding to implement, operate and maintain the cycling network using the proposed network phasing illustrated on **Map 4** as a guide. As the active network is implemented Town staff should revisit annual budgets to ensure the amount allocated for operations is sufficient.

3. As part of the annual budgeting process, Town staff should also incorporate funding to support the delivery of outreach initiatives proposed in the Action Plan in Chapter 4 of the Cycling Strategy, including the creation of an Active Transportation Coordinator part-time contract position.

4. The proposed phasing identified in the strategy should be communicated to the Town's partners to streamline implementation and to maximize route connectivity as new projects are planned for future implementation.

5. The Town should reach out to the primary and secondary partners identified in the implementation plan and continue to engage in a collaborative manner and contribute towards developing cycling infrastructure and programs in Penetanguishene and support growth in North Simcoe.

6 The Town should review and consider utilizing the five-step implementation process when moving forward with implementation of the Cycling Strategy. The details of the process and each step are outlined in OTM Book 18. During the process, key tools outlined in section 5.3 should be utilized appropriately for each step.

7 The Town should review and where appropriate apply the policy considerations identified in section 5.3.1. as existing plans are being revised or when new projects are commencing to enable change towards cycling supportive planning and design in Penetanguishene.

8 The Town should review and adopt the appropriate risk management and liability prevention strategies into day-to-day decision making related to facility planning, design, operations and maintenance.

9 **Technical Appendix E** should be used as a reference to inform the Town's future budgeting and costing for cycling facilities. The costing should be updated on a regular basis to reflect more accurate estimates based on inflation and other external factors.

10 The Town should identify opportunities to coordinate large-scale capital projects such as road works to achieve economies of scale and build the costs for cycling facilities into those budgets.

11 The Town should periodically review the potential opportunities for additional partners to support the implementation of the Cycling Strategy.

Cyclist on Tay Point Road
Photo Source | WSP 2018

6

Conclusion & Next Steps

The Town of Penetanguishene's Cycling Strategy is a tool intended to provide long-term guidance and to shape the development of cycling policies, infrastructure and programs. The plan is a major milestone and a first step towards fostering and building cycling communities in Penetanguishene. The resources that have been noted in the strategy respond to the local trends, demographics and characteristics of the Town. The plan carries the identity of Penetanguishene, and has been shaped and formed by input received from stakeholders including Town staff, external stakeholders and residents.

The recommendations in the strategy have been informed by the needs of the Town and drawing on best practices and lessons learned from municipalities across Ontario who have embarked on a similar cycling journey as Penetanguishene. Through commitment to the strategy, the Town can increase the convenience, safety and connectivity for residents and visitors of all ages and abilities, and promote sustainable and healthy community growth.

Section 6.0

This document is just the start for building cycling supportive communities. The following are suggested next steps to get the wheel rolling and start pedaling forward.

- Formally adopt the Cycling Strategy as a municipal policy document;
- Identify line-items in the Town's annual budget for cycling route implementation, maintenance, and programming;
- Continue to engage in consultation and engagement with residents and stakeholders to confirm short term cycling infrastructure and programming priorities; and
- Reach out to key stakeholders to formalize partnerships and to facilitate implementation.

The recommendations set out in the Cycling Strategy develop a foundation for the implementation of cycling infrastructure and programs. A summary of recommendations contained in the strategy is provided on the following pages.

Chapter 2 – Network Recommendations

1. The route selection criteria identified in section 2.1 (step 2) should be used beyond the lifespan of the plan when new routes are being considered to determine how best to integrate these routes with the Town's cycling network.

2. The OTM Book 18 three-step facility selection process should be used by Town staff and its partners as the network is implemented and as new routes are identified. It is recommended that the forthcoming update of OTM Book 18 be used as the primary design reference when planning, designing and implementing routes.

3. It is recommended Town staff leverage future opportunities to upscale cycling facilities when roads are next scheduled for reconstruction to provide facilities with greater separation from motor vehicle traffic.

4. Adopt the recommended cycling network illustrated in **Map 3** as a guide for the development of a connected and continuous network throughout Penetanguishene.

Section 6.0

Chapter 3 – Design Recommendations

1. OTM Book 18 should be the primary design guidance used for cycling facility design. When the update to OTM Book 18 is released, Town staff should review changes and note potential improvements for existing and proposed infrastructure.

2. Town staff should refer to the design guidelines outlined in section 2.1 when moving forward with the design and implementation of cycling routes.

3. As the cycling network is implemented, Town staff should refer to locations where *potential crossing enhancements* have been identified on **Map 3** and determine whether it is appropriate to implement additional network enhancements.

4. The Town should develop a wayfinding concept and system for existing and proposed cycling facilities and have a policy to apply wayfinding components consistently throughout the Town.

Chapter 4 – Outreach Recommendations

1. The Town should consider establishing an Active Transportation Coordinator part-time position and hire one (1) staff from March to October to fill this role (on an annual basis) to help plan, coordinate and deliver the recommended outreach initiatives and yearly action plans identified in Chapter 4 of the Cycling Strategy.

2. Town staff should review and consider undertaking the yearly action plans identified in Table 7, Table 8, Table 9 and Table 10 to encourage behavior change, create community awareness, educate residents on proper cycling techniques and create a strong culture of cycling in Penetanguishene.

3. During year 5 of the Cycling Strategy implementation (or when the strategy is next updated), Town staff should review and refine action plans for the following four years and identify outreach initiatives that are shaped by lessons learned, successes and best practices, the needs of the community at that time and the culture of cycling in Penetanguishene

Section 6.0

Chapter 5 – Implementation Recommendations

1. The Town should adopt the proposed network phasing illustrated on **Map 4** of the Cycling Strategy.

2. As part of the annual budgeting process, Town staff should incorporate funding to implement, operate and maintain the cycling network using the proposed network phasing illustrated on **Map 4** as a guide. As the active network is implemented Town staff should revisit annual budgets to ensure the amount allocated for operations is sufficient.

3. As part of the annual budgeting process, Town staff should also incorporate funding to support the delivery of outreach initiatives proposed in the Action Plan in Chapter 4 of the Cycling Strategy, including the creation of an Active Transportation Coordinator part-time contract position.

4. The proposed phasing identified in the strategy should be communicated to the Town's partners to streamline implementation and to maximize route connectivity as new projects are planned for future implementation.

5. The Town should reach out to the primary and secondary partners identified in the implementation plan and continue to engage in a collaborative manner and contribute towards developing cycling infrastructure and programs in Penetanguishene and support growth in North Simcoe.

6 The Town should review and consider utilizing the five-step implementation process when moving forward with implementation of the Cycling Strategy. The details of the process and each step are outlined in OTM Book 18. During the process, key tools outlined in section 5.3 should be utilized appropriately for each step.

7 The Town should review and where appropriate apply the policy considerations identified in section 5.3.1. as existing plans are being revised or when new projects are commencing to enable change towards cycling supportive planning and design in Penetanguishene.

8 The Town should review and adopt the appropriate risk management and liability prevention strategies into day-to-day decision making related to facility planning, design, operations and maintenance.

9 **Technical Appendix E** should be used as a reference to inform the Town's future budgeting and costing for cycling facilities. The costing should be updated on a regular basis to reflect more accurate estimates based on inflation and other external factors.

10 The Town should identify opportunities to coordinate large-scale capital projects such as road works to achieve economies of scale and build the costs for cycling facilities into those budgets.

11 The Town should periodically review the potential opportunities for additional partners to support the implementation of the Cycling Strategy.