

Grey County Cycling and Trails Master Plan

October 2020

Inside page of Report Cover

Grey County Cycling and Trails Master Plan
Prepared by:



+



What is a master plan?

Before reading the following document, it is important to understand what a master plan is meant to be and what is it not intended to be.

A master plan is a long-range planning document that recommends infrastructure improvements to guide future growth and development for the area in study. Master plans can provide a broad framework to help establish the needs and rationale for specific projects in a municipality.

A robust public and stakeholder input process through consultation and engagement is a critical component when developing a master plan. Providing multiple opportunities for citizens and stakeholders to discuss and provide feedback on the future of their community can foster public buy-in, build support and ensure the recommendations included in a master plan reflect the needs and trends of the area and its residents.

A master plan is not a commitment to projects; it should be used as a tool to inform decision making, budgeting and communications.

To clearly set the expectations for the Grey County Cycling and Trails Master Plan, the following assumptions should be reviewed and taken into consideration:

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.

Foreword

Grey County's Cycling and Trails Master Plan is a long-term guiding document that provides the County and its partners with the tools and strategies to enhance infrastructure, policy and programming for cycling and trails. **This document specifically focusses on opportunities to improve conditions for on-road cycling as well as off-road multi-use trails (non-motorized) where cycling is permitted.**

This document does not contain recommendations for single-track or wilderness trails, however, it is recognized that there are extensive networks and a vast abundance of nature and wilderness trails within the County. Most notable is the Bruce Trail which is over 900 kilometres in length of which 426 kilometres is located in Grey County. In addition to the Bruce Trail, there are extensive opportunities for hiking on nature / wilderness trails including but not limited to trails that are managed by Grey County, Conservation Authorities and organizations such as the Kolapore Wilderness Trails Association (e.g. 50 kilometres of wilderness trails in Kolapore Uplands).

Though recommendations for single-track, wilderness trails are not contained in this plan, County staff will continue to work with its partners inclusive of non-government agencies which have strong community ties and grassroots foundations to advance future implementation and improvements of off-road wilderness trails. In addition, this plan is not intended to supersede any standards, guidelines or processes used for off-road wilderness trails; it is meant to guide future decision-making for the planning, design, implementation and operations of on-road cycling routes and off-road multi-use trails where cycling is permitted.

As we move forward to implement the Cycling and Trails Master Plan, we will continue to engage with our partners in a collaborative manner to enhance opportunities for recreational, tourism and active living in Grey County by leveraging our existing assets and seeking opportunities for future improvements.

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The intent is for the Cycling and Trails Master Plan to provide the County and its partners with the tools and guidance necessary to improve opportunities for cycling and trails in Grey County now and in the future.

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CHAPTER 1

Introduction

Grey County is located along southern Georgian Bay and is made up of nine member municipalities that encompass an area of approximately 4,500 square kilometres. The County spans across different geographic landscapes including the Niagara Escarpment, provincially significant wetlands, agricultural lands, intricate river systems and aggregate sites. As a result of this geography, the County has a number of tourism and recreational assets. It is estimated that Grey County attracts over 2.7 million visitors annually and \$333 million in visitor spending.

There is a long-standing history and culture of recreation and active lifestyles in Grey County. The County is home to hundreds of kilometres of trails and on-road cycling routes that link small communities, provide opportunities for long-distance travel throughout the County and facilitate regional connectivity in southern Ontario. It is the on-going and concerted efforts by County staff and its partners to enhance cycling and trail opportunities along with the diverse landscapes and existing natural features that make Grey County a premier destination for recreation and tourism.

This is Grey County's Cycling and Trails Master Plan. It is meant to be the guiding document to help the County, member municipalities and partners achieve its future vision for cycling and trails by providing the supportive tools and resources to help support on-going efforts and impact future change.

1.1 THE PLAN FOUNDATIONS

Within Canada and the Province of Ontario, Grey County is considered a leader in the development and application of policy that supports mobility and active lifestyles in rural and urban communities. The inclusion of clear directive related to the planning, design, implementation and operations of infrastructure for cycling, trails and other non-motorized use is included in several Council approved planning and policy documents.

Existing policies are further enhanced by the County's marketing and tourism efforts to strengthen local economies and quality of life within its communities by promoting Grey County as a leading tourist destination in Ontario. In 2018, Grey County identified several priorities to enhance cycling, trails and active transportation. To help achieve these priorities, the County initiated a study to help guide and inform future investments – a Cycling and Trails Master Plan.

The development of the County's Cycling and Trails Master Plan is founded on past projects and initiatives that have outlined the need for a long-term guiding document to identify and prioritize opportunities to enhance cycling, trails and other non-motorized forms of recreation and travel within Grey County and its member municipalities. At a high-level, the Cycling and Trails Master Plan is intended to reflect the guiding principles and objectives found in policies at all levels of government that support enhanced mobility, increased quality of life and healthy communities.

Figure 1 provides an overview of key initiatives and plans that helped set the foundation for the Cycling and Trails Master Plan.

A detailed overview of all plans and policies that were reviewed to inform the master plan is contained in **Appendix A**.



Figure 1 - Cycling and Trails Master Plan Foundations



In 2018, Grey County received funding from the Province of Ontario's Municipal Commuter Cycling (OMCC) Program. The OMCC Program was created to provide funding and support for the implementation of cycling infrastructure and projects across Ontario. As part of the OMCC Program, Grey County received \$530,652 to:

- Develop a Cycling and Trails Master Plan;
- Implement 22 kilometres of paved shoulders on County roads; and
- Purchase five bike counters.

In addition to this funding, Grey County partnered with Regional Tourism Organization (RTO) 7: BruceGreySimcoe to help fund and support the Grey County Cycling and Trails Master Plan.

At the core, the Cycling and Trails Master Plan is intended to incorporate the recommendations identified in these past planning documents to help outline clear next steps to move forward with the implementation of cycling, trails, active transportation infrastructure, programs and initiatives. The master plan has been developed with input and involvement from County staff, member municipalities, local stakeholders, tourism representatives, public health officials, residents and decision makers.

The master plan is informed by existing processes and meant to adapt to future opportunities as a means of advising decision making, communications and coordination among those who will be responsible for its implementation. It is intended to be flexible; as such any future changes to the master plan should be reviewed and documented by County staff in consultation with member municipalities, stakeholders and residents.

1.2 ABOUT THE PLAN

The following sections outline who the master plan is intended for and how it was developed. It is important to establish an understanding of these assumptions and the study process to help manage expectations of the recommendations and guidance provided in this plan.

1.2.2 WHO IS IT FOR?

The Cycling and Trails Master Plan is intended to address a range of users that have different interests, abilities and skill-levels. Though a master plan is not intended to follow a “one size fits all” approach, the recommended network and supportive infrastructure considerations are intended to enhance multi-modal travel and recreational opportunities for all ages and all abilities.

The proposed cycling and trails network identified in this plan is intended to provide a range of opportunities for all ages and abilities, with a primary focus on:

cyclists

Typically, cycling trips can range from short-distances for commuter / utilitarian purposes to long-distance and multi-day trips for recreational and tourism purposes. In addition to pedestrians and cyclists, the Cycling and Trails Master Plan has been developed with consideration for mobility-assisted users and other non-motorized forms of travel including e-bikes.










pedestrians

Typically, pedestrian trips can range from 400 metres for a 5-minute trip in built-up areas and up to 30 kilometres for a recreational trip in natural or rural settings. There are different types of pedestrians depending on trip purpose and type – this can include walkers, hikers, joggers, runners, etc.

all ages and abilities...

Refers to the planning and design of transportation networks and public realms that are considered safe, comfortable and equitable by the community.

Historically, planning design principles have typically favoured very confident riders. The National Association of City Transportation Officials (NACTO) has identified the following users to promote an **all ages and abilities** approach when planning, designing and implementing a multi-modal transportation system:

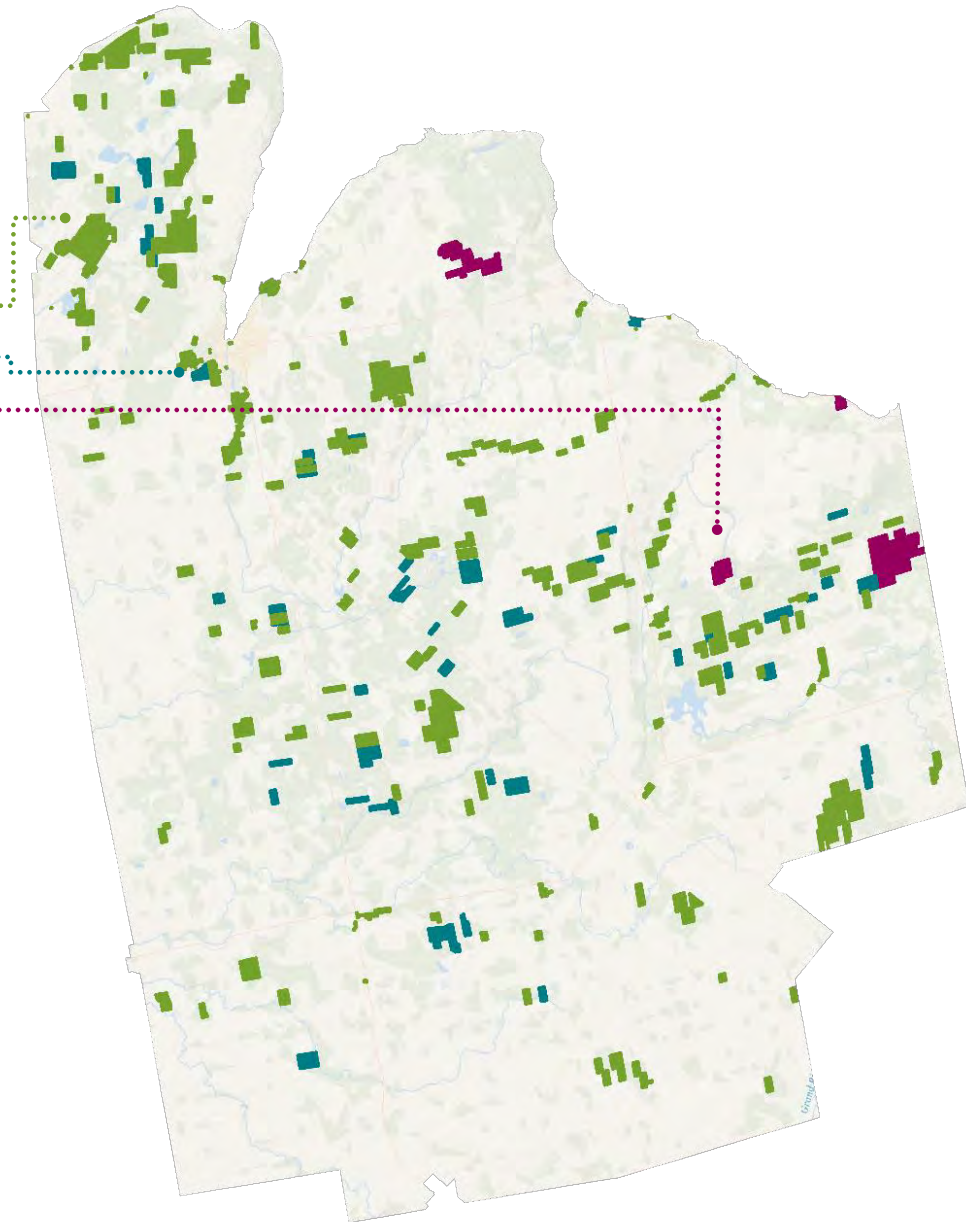
-  Children
-  Seniors
-  Women
-  People riding bike share
-  People of colour
-  Low-income users
-  People with disabilities
-  People moving goods or cargo
-  Confident users

The County offers several recreational opportunities for various user groups including snowshoeing, cross-country skiing, mountain biking and equestrians in Grey County. Though the Cycling and Trails Master Plan does not provide recommendations for new single-track off-road trails or motorized trails, the plan does identify opportunities to enhance connections to destinations that are popular for these recreational activities, such as:

- Conservation Areas
- County Forests
- Provincial Parks

In addition to trails that are owned and / or managed by government agencies, there are other organizations that manage extensive trail systems which serve as major destinations for residents and visitors to Grey County. For example, the largest system of trails in Grey County is managed by Bruce Trail Conservancy (BTC) which includes approximately 426 kilometres of trails. The Bruce Trail is managed, by a total of nine clubs of which three serve Grey County: Sydenham Bruce Trail Club, Beaver Valley Bruce Trail Club and the Blue Mountain Bruce Trail Club. A significant portion of the Bruce Trail is located on private lands and access is often facilitated by a “hikers-only handshake agreement” negotiated by the BTC.

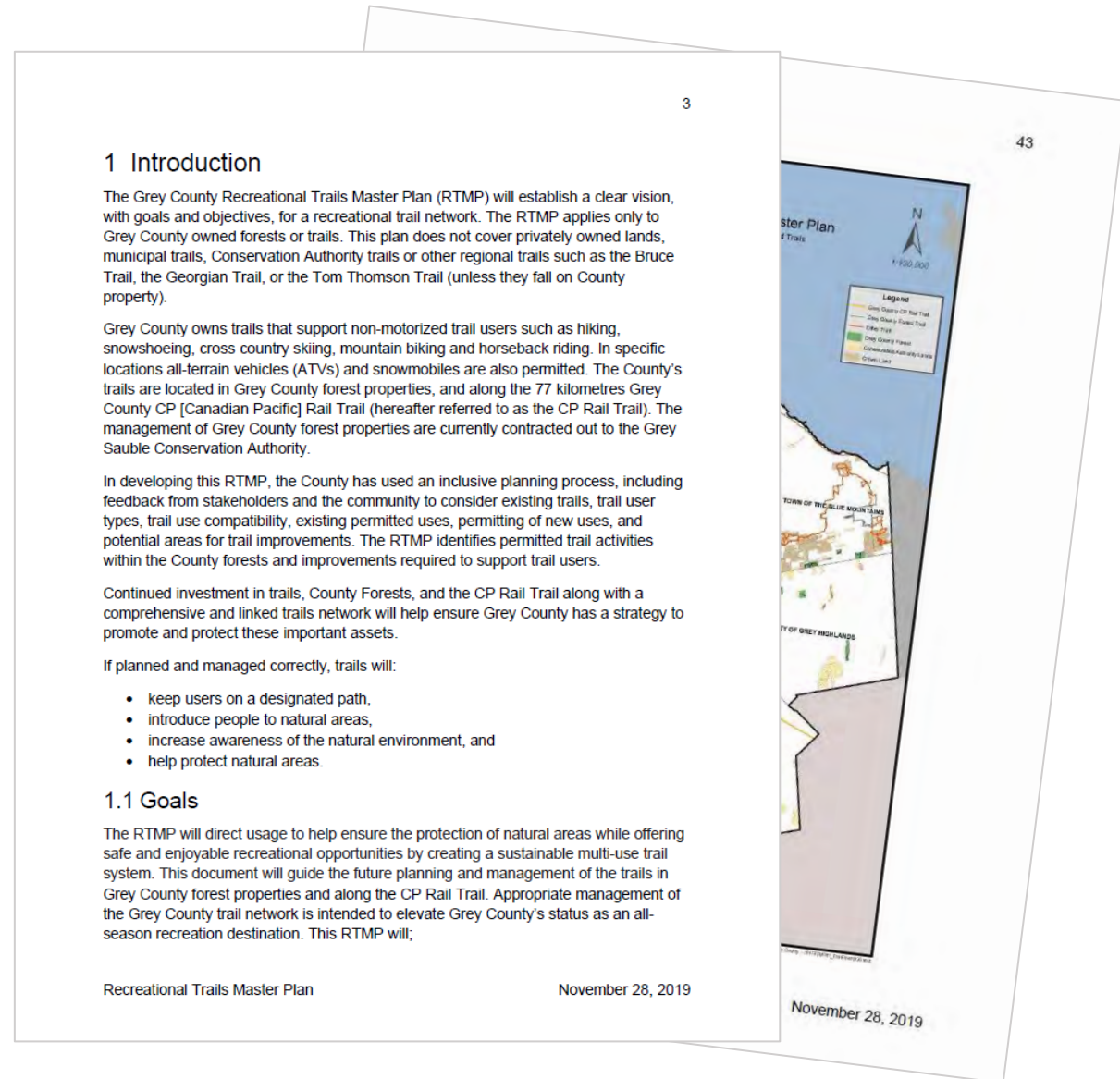
Additionally, the BTC owns and manages approximately 4,417 acres of protected lands within the County. This number continues to increase as the organization continues work on land conservation, specifically protection of the Niagara Escarpment within Grey County. It is important that the County continue to work and partner with non-government agencies, such as the BTC and other organizations where possible to promote existing and natural tourism assets, strengthen efforts for land conservation and enhance opportunities for recreation and active lifestyles.



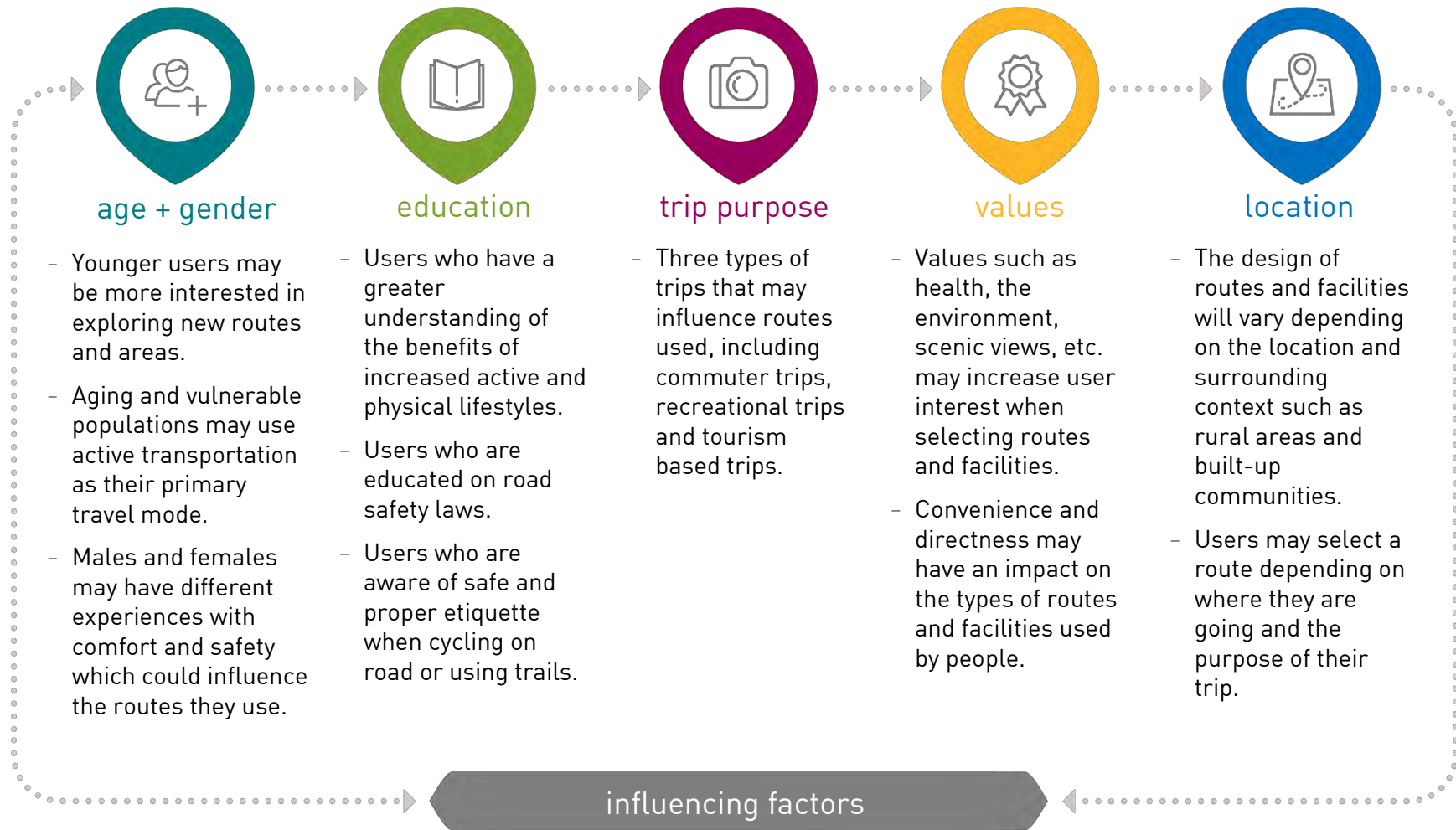
Additional reference should be made to the County's Recreational Trails Master Plan (RTMP) for new proposed off-road recreational trails. The RTMP is intended to inform the future planning, construction, design, and management of trails located in County-owned forests and along the Grey County CP Rail Trail. The plan will outline the County's vision to enhance options for recreational activities such as hiking, snowshoeing, cross-country skiing and mountain biking by:

- Providing a framework to guide future decision-making;
- Protecting natural areas and promoting sustainable trail use;
- Identifying priority trail projects;
- Providing evaluation tools for considering trail requests; and
- Promoting stewardship and sustainability.

Collectively, the Cycling and Trails Master Plan and the Recreational Trails Master Plan will provide County staff, member municipalities and decision makers, with the information and resources to help enhance opportunities for on-road cycling, multi-use trails and off-road recreational trails for a variety of trip purposes.



It is recognized that an equitable and accessible network of transportation and recreational routes should accommodate a range of users, and as best as possible incorporate an all ages and abilities approach to planning, design, implementation and operations. Though pedestrians and cyclists may have different interests and preferences, there are common factors that shape how people may use the County's cycling and trails network. These factors help shape the information, tools and resources contained in the plan to inform a set of recommendations that are tailored for different user groups and trip types. The factors that were considered when developing the Cycling and Trails Master Plan are summarized below.



1.2.3 HOW WAS THE PLAN DEVELOPED?

The Cycling and Trails Master Plan was developed between Winter 2018 and Winter 2020 using a three-step process. Each step was informed by feedback received from the public, County staff and a group of stakeholders including representatives from the County's nine member municipalities and various agencies. Error! Reference source not found. provides an overview of the study process and key consultation milestones.

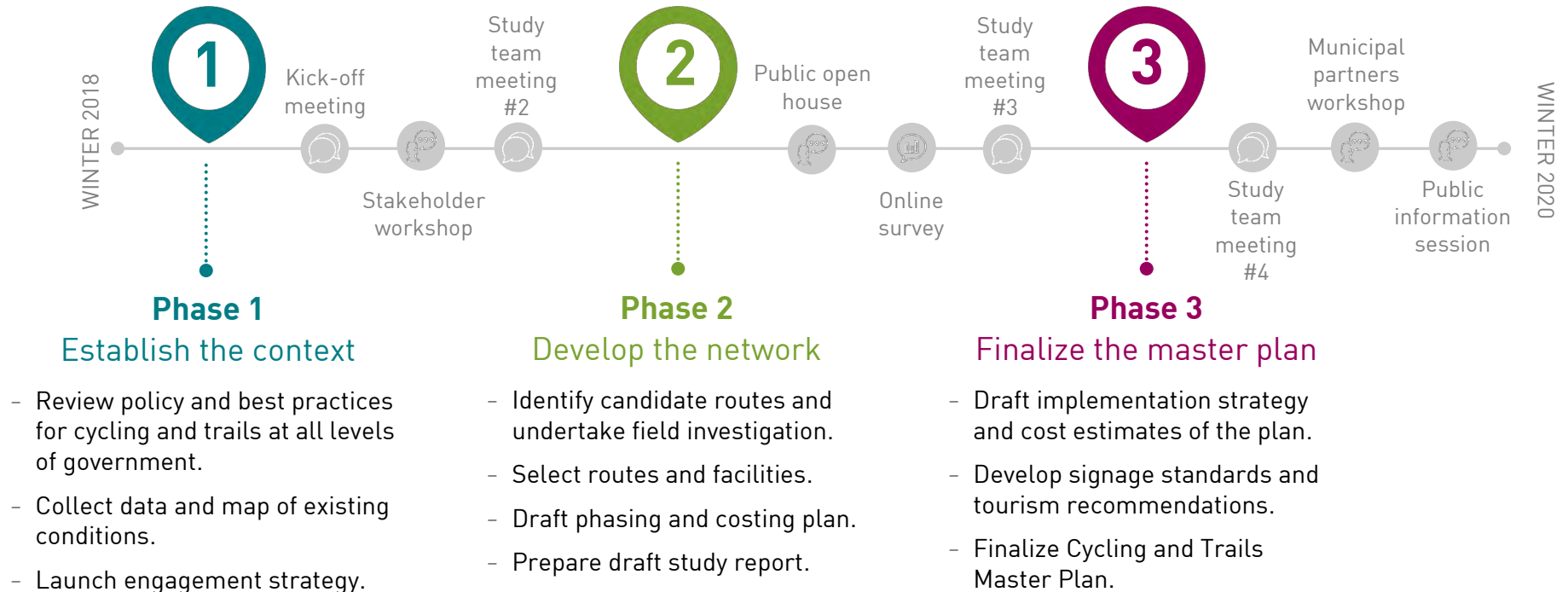


Figure 2 - Study Process and Consultation Milestones

The development of the County's Cycling and Trails Master Plan is consistent with Master Plan Approach #1 of the Municipal Class Environmental Assessment (MCEA) process, which takes into account Phases 1 and 2. A key component of the MCEA process is to provide meaningful engagement and consultation with residents, stakeholders, member municipalities and County staff through a minimum of two points of contact during the study process. The following section provides an overview of the consultation and engagement activities that were undertaken throughout the study process.

1.2.4 CONSULTATION AND ENGAGEMENT

Understanding the needs of residents and lessons learned from decision makers was a critical component during the study process to help ensure the recommendations contained within the plan help reflect the County's future aspirations and goals for cycling and trails. A key component of the Cycling and Trails Master Plan study process was to provide meaningful opportunities for residents, decision makers and County staff to engage with the study team and provide their feedback.

To inform the development of the Cycling and Trails Master Plan, a consultation strategy was prepared during Phase 1 of the study process to outline an approach for engaging County staff, members of the public, stakeholders, technical agencies and member municipalities' elected officials and staff. A number of consultation activities were undertaken during the study process to represent the County's commitment to those currently involved in the planning process and those who could have a role in future stages of the process, to ensure that their input and interests would be reflected in a strategy to improve cycling and trail infrastructure, policies and initiatives throughout Grey County. An overview of the consultation events and activities that were undertaken is provided below.



4 study meetings

with the County's project team to discuss work completed to date, study findings, upcoming events and next steps.



4 in-person events

to provide residents and stakeholders with an opportunity to learn about the study, ask questions about key issues and provide input on study deliverables.



1 online activity

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

staff from:

Tourism
Transportation Services
Planning and Development
Grey Bruce Health Unit

30+ attendees - stakeholder workshop

50 attendees - public open house

20+ attendees - municipal staff workshop

25+ attendees - public information session

496 participants

11,325 data points collected

the online survey is not statistically valid (not representative of the County's total population) as it is typically targeted at engaged users

The following graphics provide a summary of some of the input that was received through these consultation activities. **Appendix B** provides additional details on the input gathered from each engagement and consultation event.

types of users



45%
cyclists



20%
hikers

based on results from the online survey tool, most respondents identified as cyclists (45%) followed by hikers (20%)

summary of usage

respondents from the online survey indicated why and when they cycle or use trails in Grey County:



42%

cycle or use trails for recreation and leisure



40%

cycle or use trails for health and fitness

62% cycle or use trails in Grey County every day or a few times a week

why develop the plan

respondents from the online survey indicated the top three reasons to develop the plan:



25% increase opportunities for people to cycle and use trails



24% improve quality of life



16% improve cycling and trail use as a viable transportation option

how users select routes

attendees at the public open house identified the criteria they find most important when selecting routes to use:



road classification

characteristics of the road and how it functions within the overall network



access and potential use

how well the route connects to key destinations

summary of priorities

respondents from the online survey and public open house indicated their top priorities to enhance cycling and trails in Grey County:



infrastructure and gaps



signage and wayfinding



performance measures



land use planning



maintenance

1.2.5 ELEMENTS OF A SUCCESSFUL PLAN

A successful master plan is more than routes and facilities; it should encompass supportive initiatives to influence behaviour change, create community awareness and foster a culture of active lifestyles. The Grey County Cycling and Trails Master Plan is intended to build upon the successes of the County and its partners including initiatives related to education, encouragement, enforcement, evaluation, engineering and equity – also known as the six ‘E’ approach. A description of the six ‘E’s is provided below:

	What...	How...
Educating	The increase of knowledge of proper techniques, practices and opportunities related to cycling and trail use.	<ul style="list-style-type: none"> – Use existing platforms (websites, social media) to distribute educational information. – Work with partners to undertake bike rodeos and CAN-BIKE courses.
Encouraging	Methods to influence behaviour change resulting in more people engaging in active forms of travel and recreation.	<ul style="list-style-type: none"> – Host annual rides to highlight new infrastructure. – Implement amenities at key trailheads and destinations e.g. bike parking, benches, etc.
Enforcing	Ensure pedestrian and cyclist safety by applying existing roadway laws and regulations.	<ul style="list-style-type: none"> – Work with local OPP to undertake annual safety blitzes. – Work with local clubs to establish trail safety and stewardship programs.
Evaluating	Tools to measure how infrastructure and programs are being used and how well they achieve the desired outcomes.	<ul style="list-style-type: none"> – Identify and implement a monitoring program to assess the impact of implementing new infrastructure / initiatives. – Invest in technology to support data collection.
Engineering	Create safe and convenient places where people want to bike, ride and engage in active forms of travel and recreation.	<ul style="list-style-type: none"> – Implement infrastructure to encourage more people to bike and / or walk. – Provide ancillary facilities (e.g. bike and / or car parking) for different trip types.
Equity	Provide mobility choices that are equitable and accessible for more vulnerable populations such as youth, seniors, and low-income persons.	<ul style="list-style-type: none"> – Work with the public health unit to better understand vulnerable populations and target areas. – Establish communication methods to address specific user needs and abilities.

1.3 GREY COUNTY NOW

The Cycling and Trails Master Plan is made for Grey County, its member municipalities and residents – the recommendations and information contained in this plan are meant to respond to the community’s needs and aspirations for enhanced quality of life, increased options for mobility and opportunities for recreation. To obtain this goal it is important to establish an understanding of the County’s demographics – who the plan is designed for and who the plan can impact.

The following graphics provide a snapshot of the Grey County community profile based on information from the 2016 Statistics Canada Census Data, the Grey County Growth Management Plan (2015) and the County’s Official Plan – Recolour Grey (2019).

96,070

2016 population

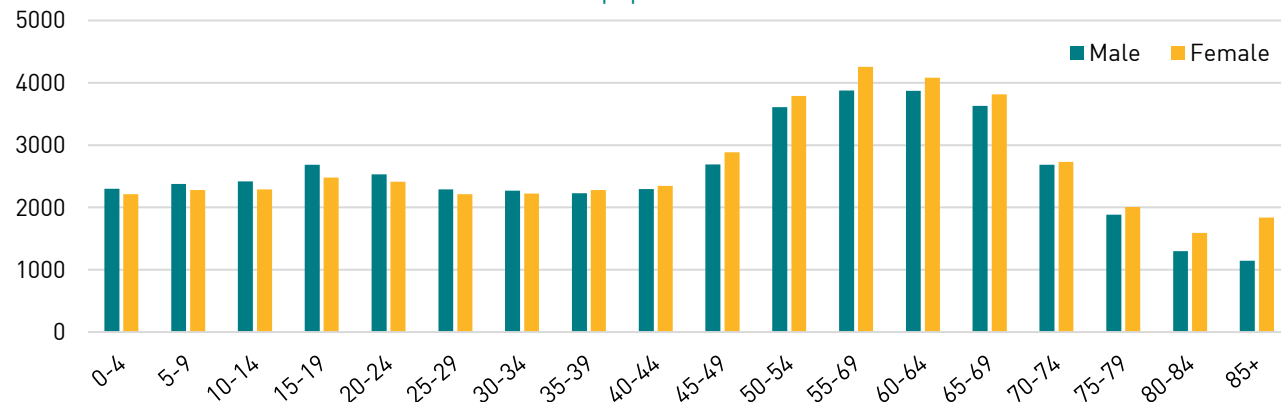
109,190

2038 projection

14%

population increase

2016 population distribution



primary travel mode to work



91%

drive



7%

walk



1%

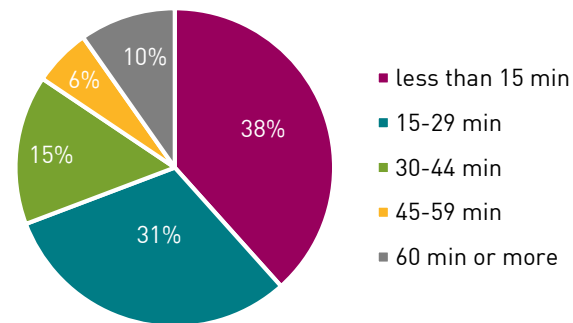
bike



1%

other

commuting times for employed labour force



1.4 BUSINESS CASE & BACKGROUND

It is important to establish the context for cycling and trails that is informed by past successes and the potential benefits to investing in supportive infrastructure and initiatives, to help build a business-case and rationale for future decision-making. The following sections provide an overview of the various components that form the context of cycling and trails for Grey County based on research, existing programs and initiatives and existing infrastructure.

1.4.1 BENEFITS

Investments to cycling and trails infrastructure and initiatives can have a positive impact on a community and its residents. Research has shown that increased use in non-motorized forms of travel and recreation can enhance overall quality of life, encourage active and healthy lifestyles and help to support future commitments.

Five categories of benefits were reviewed:



health



community



social



economic



environmental

Figure 3 provides an example of some benefits. A summary of the various benefits by category is provided on the following page.

example of benefits



reduced risk of chronic illness



increased sense of community



increased mobility and independence



supports local tourism initiatives



increased protection of natural spaces



Figure 3 - Examples of Benefits



health

- Increased physical and active lifestyles.
- Improved cardiovascular and mental health, and reduced stress.
- Lower health care costs.
- Increased prevention of chronic illness such as heart disease and diabetes.



community

- Contribute to a stronger sense of place and belonging.
- Enhance the cycling culture.
- Improve the perceived sense of safety and comfort.
- Increase sense of public realm and places where people want to be.



social

- Increased travel options and increased access to jobs / amenities.
- Improved mobility and equity for vulnerable populations.
- Increased independence, mobility and health for aging populations.



environment

- Reduced carbon dioxide emissions and overall air pollution.
- Highlights parklands and green spaces.
- Protection of green space and natural environments



economic

- Low cost mobility options.
- Infrastructure funding and partnership opportunities.
- Local investment in business and community development.
- Increased tourism and popularity for active forms of travel and recreation.
- Support for local and regional tourism initiatives.

1.4.2 INITIATIVES

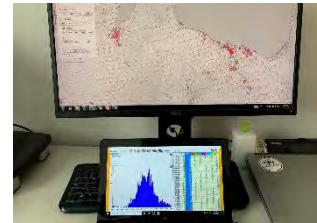
Grey County has a long-standing history of undertaking different programs and initiatives to enhance opportunities for non-motorized forms of travel and recreation, and to further promote the County as a premier tourism destination. A review of past and existing initiatives was completed to ensure the recommendations contained in the plan build upon past successes and lessons learned. Examples of past and current initiatives undertaken by the County and its partners include the following:

paved shoulder policy



The Paved Shoulder Policy provides direction that where possible, County road reconstruction will include paved shoulders and this is included in the County's annual capital budgets.

bike counters



In 2018, the County purchased five bike counters (through OMCC funding) which can be temporarily installed along on and off-road routes throughout the County, to assist in planning and data collection.

open data



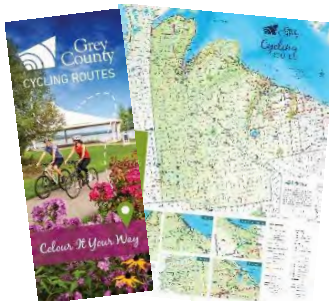
The County's GIS data is publicly available on the Open Data webpage and can be downloaded / viewed by users for routing purposes and to better understand what currently exists.

guides and brochures



Grey County Tourism (part of the Economic Development, Tourism and Culture department) offers several guides and brochures to help promote local and regional assets including trails, conservations areas and tourist destinations.

hard-copy cycling map



The County's cycling map illustrates several touring loops / routes that are organized based on level of difficulty. The map also identifies key cycling destinations, community destinations as well as existing off-road trails and information for different road surfaces.

The back-side of the map provides information for each touring loop / route including distance, surface and available parking locations. Additional information is provided including trail etiquette, rules of the road and full-service bike shops in Grey County.

online cycling map portal



The County's online cycling map portal displays key information including the County's touring loops, road surface, elevation, cycling counts using STRAVA data and certified bike-friendly businesses. The online map portal also displays connections into neighbouring municipalities in Bruce and Simcoe Counties.

bike-friendly businesses



In 2012, Grey County joined Ontario by Bike and undertook a set of workshops with 20 businesses. Since this time, the County has continued to work with Ontario by Bike to develop experienced-based cycling routes and itineraries (incorporating wineries, and other attractions), increase the membership to approximately 50 bike-friendly businesses and undertake annual businesses surveys.

local events and promotion

There are a number of local events and initiatives that are planned and hosted by the County's partners to encourage more people to explore their community by foot and bike. These events can help to foster a strong sense of community and create a conversation about cycling and trails in Grey County. Examples of past and on-going events undertaken in the County include:

Jane's Walks [here](#)



A citizen-led walking tour of the community to showcase places where people live, work and play. The walks are free to attend and guided at a leisurely pace suitable for all ages and abilities.

Ride Don't Hide [here](#)



A nation-wide fundraising bike ride to raise awareness for mental health. The bike ride takes place in over 25 communities across Canada including Owen Sound.

Women's Ride Day [here](#)



The event is intended to introduce women to group riding, provide skill-development workshops and to encourage more women to bike.

local events and promotion (continued)

Growling Beaver Brevet [here](#)

The Growling Beaver Brevet made its debut in 2015 to celebrate cycling and to help people with Parkinson's to live well today. This is a social (non-race) ride with 250 cyclists riding 40, 60, 100 or 200 km routes through the scenic Beaver Valley at the height of fall colours. The routes have a mix of tarmac and scenic country gravel roads. Every rider carries a "passport" that will be authenticated at checkpoints, such as the Kimberley General Store, which provide authentic food and drink.

Sea Otter Canada [here](#)

One of North America's most prominent bike festivals with a variety of race options and an expo area. The first Sea Otter Canada was held July 4 to 7, 2019 in Blue Mountain and included 9 different racing and riding events across a range of on-road courses and off-road trails to provide cyclists of varying ages and skills levels. In addition, the expo area included activities for children, bike clinics, local food trucks and craft brewers, concerts and over 200 demo bikes.

Blue Mountains Gran Fondo [here](#)

The Blue Mountains Gran Fondo was previously the Grey County Road Race and rebranded in 2017. For several years these races were sole Canadian qualifier events for the UCI Gran Fondo World Series, and in some years included Time Trial events. A short and long course has been available, with age categories for men and women. In 2019 a gravel course was added.

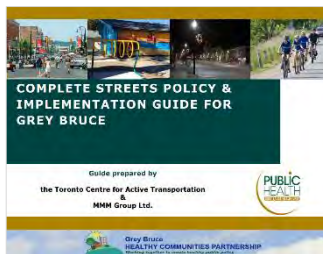
local events and promotion (continued)

In addition to the examples noted above, there are a number of recurring events hosted by the Bruce Trail and other non-government partners. For instance, the Beaver Valley Bruce Trail Club regularly hosts:

- Weekly guided half-day or day-long hikes of various difficulties (drawing hikers from the County and elsewhere).
- Four-day “end-to end” hikes that are attended by hikers from across the province.
- Two-day Falling Water Hike (2019 event sold-out in one day).
- Special hikes that highlight specific educational and environmental issues.
- Running clubs who use the Bruce Trail for competitive marathons.
- On-going work with the County and other partners to enhance amenities available to all tourists at various locations in Grey County (e.g. the stairs at Hogg’s Falls).
- Obtaining funding, purchasing and then stewarding properties to secure and protect the wilderness nature of the Bruce Trail (the Bruce Trail owns and / or manages approximately 4417.3 acres of protected land in Grey County).

Within Grey County, there are three local Bruce Trail clubs through which residents and others can enjoy the benefits of volunteering to protect existing trails and the environment. For example, the Beaver Valley Bruce Trail club has 585 members and over 150 members are active volunteers in maintaining trails and properties.

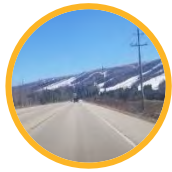
complete streets policy & implementation guide



In 2015, the Grey Bruce Health Unit commissioned and completed a study to develop a Complete Streets Policy and Implementation Guide for Grey County and Bruce County. The goal of the study was to establish a “made in Grey Bruce” complete streets policy based on the needs, opportunities, and specific concerns of the region and that can be supported by member municipalities and adopted at the local level, with specific consideration between the urban and rural landscapes. The document is intended to provide policy support and help inform future, detailed studies.

1.4.3 FACILITIES AND ROUTES

There are approximately 876 kilometres of existing on and off-road routes located along County roads, local municipal roads and former rail corridors as well as within municipal parks, conservation areas and County forest tracts. Many of these routes provide local connectivity in communities and built-up areas and in some locations, link rural areas within Grey County. A summary of the existing cycling routes and trails located in Grey County is provided below:



95 km paved shoulders
includes paved shoulder width of 1.5 metres



592 km off-road trails
includes multi-use trails and single-track / hiking trails such as the Bruce Trail (the Bruce Trail within Grey County includes 334.4 km of off-road sections and 91.65 km of on-road sections)



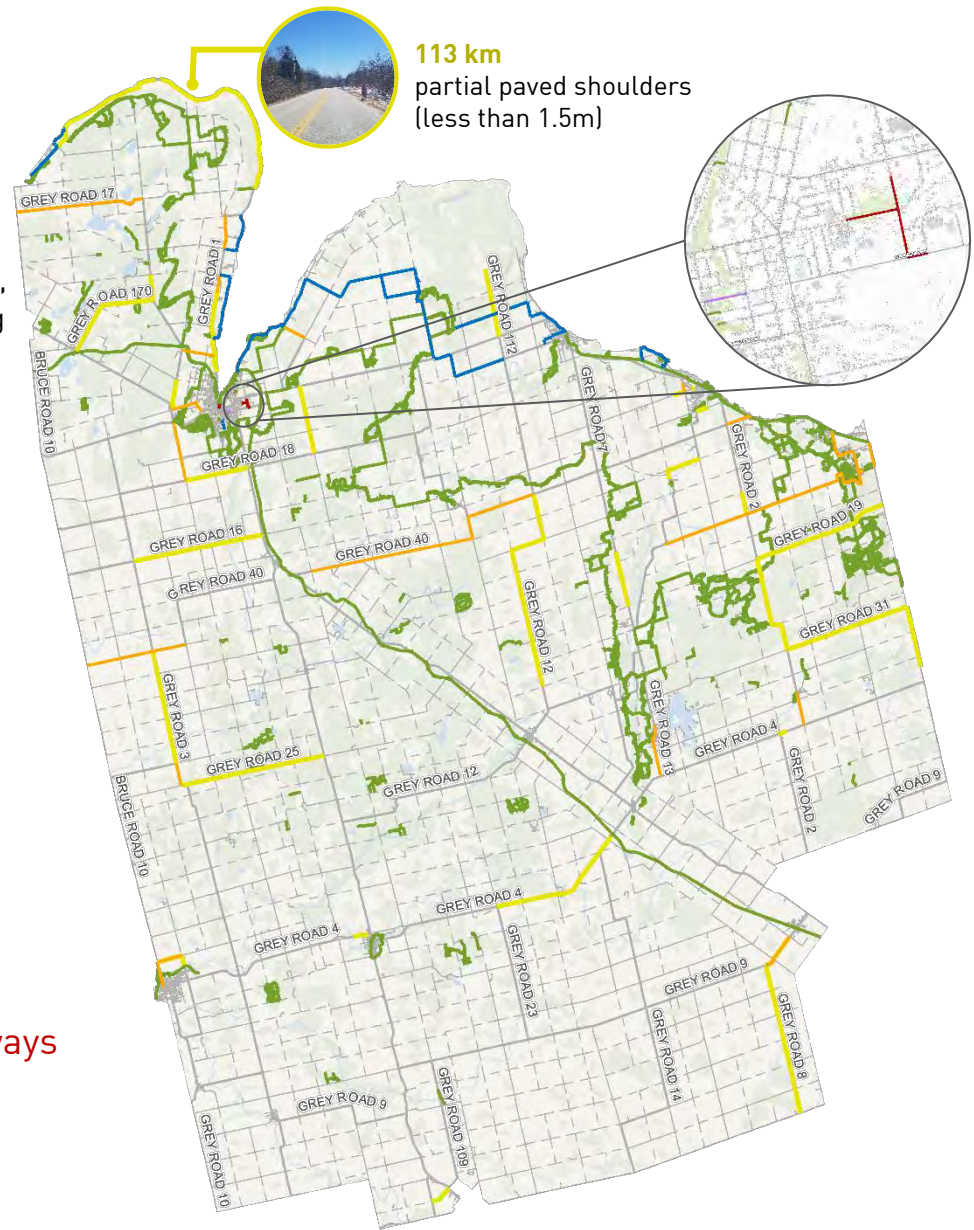
74.1 km signed routes
includes signage for the Waterfront Trail and the Georgian Bay Cycling Route



1.7 km in-boulevard multi-use pathways



0.37 km bike lanes



In addition to these routes, there are several regional trail systems within the County. These trail systems provide county-wide connectivity, facilitate long-distance travel, support regional tourism initiatives and link to communities within and outside of Grey County. In most cases these regional trail systems are located off-road, however, in locations where the route is located along a road, it is supplemented with route markers and signage to provide wayfinding guidance for users. The regional trail systems include:

Bruce Trail



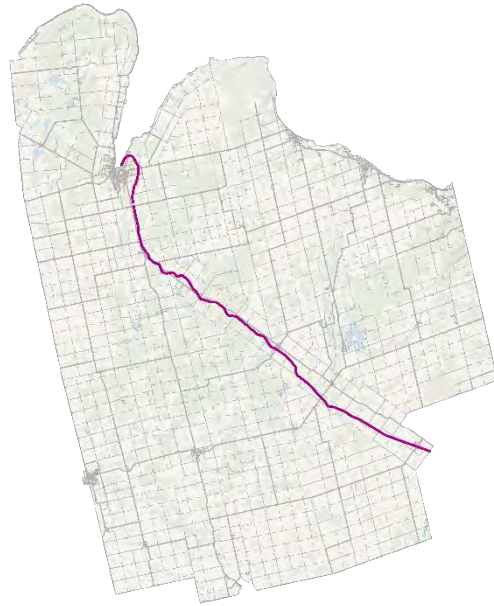
The Bruce Trail is the oldest and longest public footpath in Canada. The trail consists of just under 900 km of main trail and over 400 km of side trails, of which 426 km is located in Grey County. The Bruce Trail is located along the Niagara Escarpment connecting Niagara Region in the south to Tobermory in the north. The trail is managed, stewarded and promoted by the Bruce Trail Conservancy and its nine Bruce Trail clubs. An important goal of the Bruce Trail Conservancy is to purchase and otherwise secure the properties around the trail in an effort to “create a ribbon of wilderness available to everyone, forever. The local Bruce Trail clubs that serve Grey County include the Sydenham Bruce Trail Club, Beaver Valley Bruce Trail Club and the Blue Mountain Bruce Trail Club. Cycling is not permitted on the majority of the Bruce Trail.

Great Lakes Waterfront Trail



The Great Lakes Waterfront Trail spans over 3000 km connecting Sault Ste Marie to La Route Verte in Quebec. In 2017, the Waterfront Regeneration Trust expanded the trail into Grey County as well as Manitoulin Island, Bruce County and Huron County as part of on-going work for the Georgian Bay Cycling Route. The Great Lakes Waterfront Trail is primarily located along paved roads with sections of unpaved path and gravel roads. In Grey County, the trail utilizes the Tom Thomson Trail and the Georgian Trail.

Grey County CP Rail Trail



The Grey County CP Rail Trail is a 77 km multi-use trail that begins in Owen Sound and runs south to Dundalk. The trail connects south into Dufferin County as the Dufferin County CP Rail Trail that terminates in Orangeville. The trail surface varies from stone dust (Owen Sound to Berkeley) and coarse gravel (Berkeley to Dundalk). Motorized use such as all-terrain vehicles, is permitted along specific sections of the trail. The Grey County CP Rail Trail is owned and managed by the County.

Province-wide Cycling Network



The Province-wide cycling network is the outcome of the #CycleON Ontario's Cycling Strategy: a guide to enhance cycling as a viable mode of transportation over the next 20 years in Ontario. The Province-wide cycling network is meant to guide the future of cycling infrastructure decisions with the goal of establishing a connected and consistent network through partnerships with the Provincial staff, municipal partners and external agencies. Within Grey County, the Province-wide cycling network includes part of the Great Lakes Waterfront Trail and the Grey County CP Rail Trail.

Georgian Trail



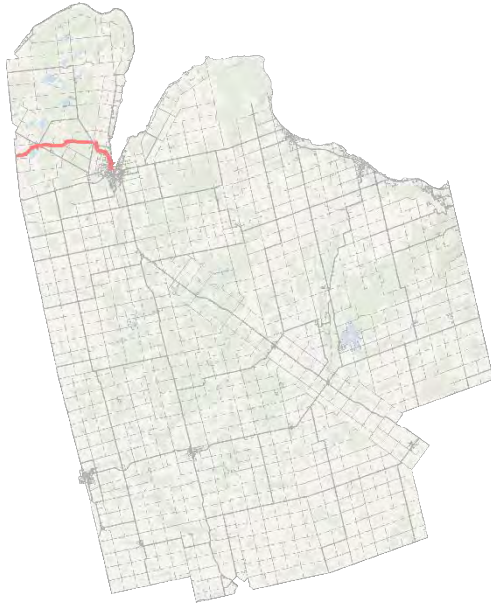
The Georgian Trail is a 34 km off-road multi-use trail that begins in Meaford and connects south-east to Collingwood (Simcoe County), along the former Northern Railway line that was abandoned in 1984. The trail is a hard-packed granular surface that permits use from walkers, joggers, cyclists, cross-country skiers and snowshoers. The trail is owned by member municipalities and is maintained by the Georgian Cycle & Ski Trail Association which represent the three participating municipalities: Municipality of Meaford (Grey County), Town of The Blue Mountains (Grey County) and Town of Collingwood (Simcoe County).

Tom Thomson Trail



The Tom Thomson Trail is a multi-use trail that begins in Owen Sound and connects to the Georgian Trail in Meaford. The trail is intended for non-motorized, multi-use purposes (cycling, hiking and horseback riding) from spring to fall. The trail consists of 41.2 kilometres of main trail and 44.1 kilometres of alternate routes. The trail is located both on and off-road and the surface varies from paved off-road sections, crushed stonedust, gravel roads and hard-packed surfaces with some rough / rocky sections. Cyclists with hybrid or mountain bikes are recommended to use the trail (e.g. not road bikes) due to the trail surface.

Georgian Bluffs Trail

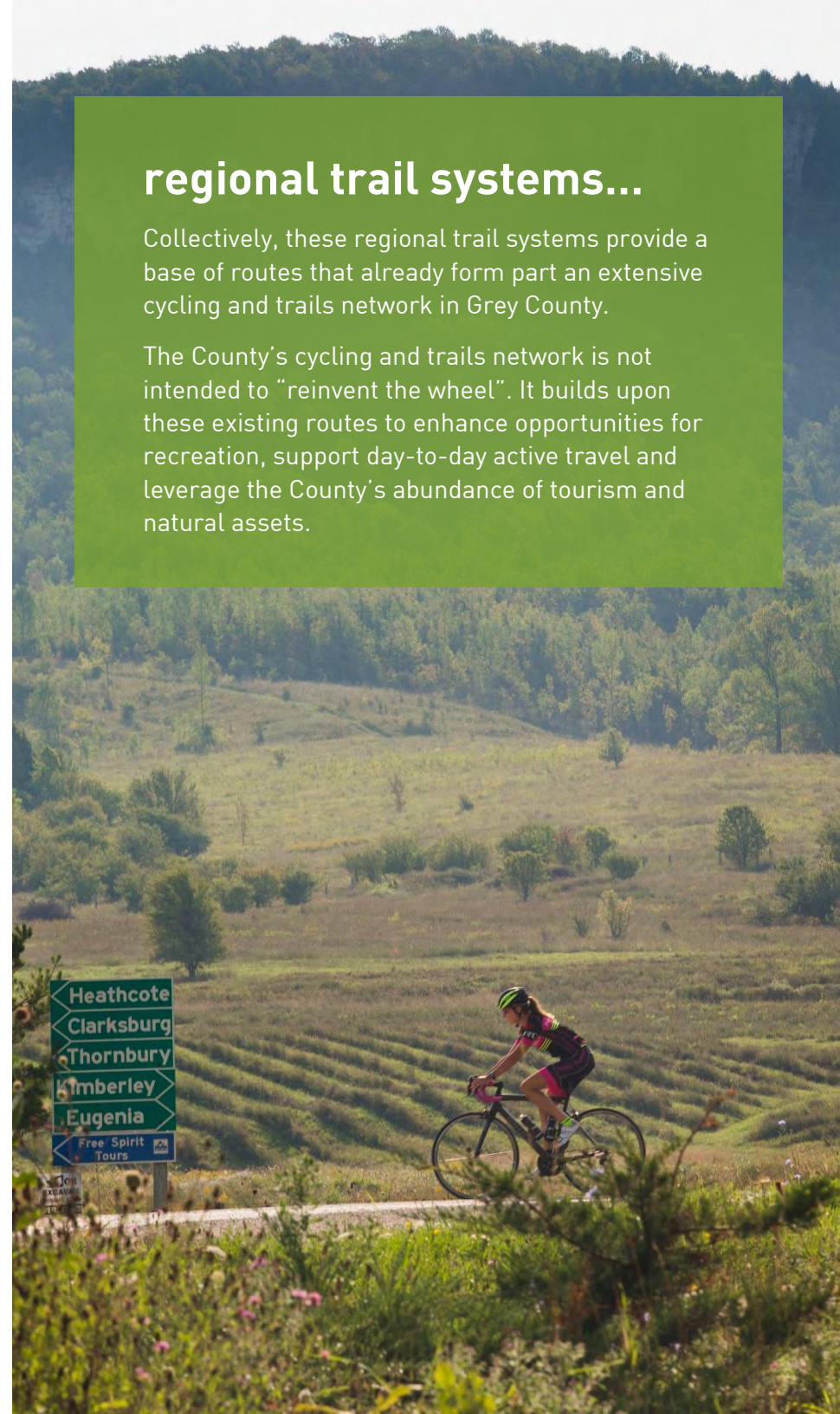


The Georgian Bluffs Trail is a 16 kilometre multi-use trail that connects the City of Owen Sound to Park Head in Bruce County. The trail is located on the former CN rail corridor along the Niagara Escarpment providing scenic views of Georgian Bay. The trail passes through a variety of terrains such as farmland, swamp and bush with a gravel surface thorough the entire length. Permitted activities along the Georgian Bluffs Trail include hiking, walking, equestrian use, snowshoeing and ATC use with a valid permit.

regional trail systems...

Collectively, these regional trail systems provide a base of routes that already form part an extensive cycling and trails network in Grey County.

The County's cycling and trails network is not intended to "reinvent the wheel". It builds upon these existing routes to enhance opportunities for recreation, support day-to-day active travel and leverage the County's abundance of tourism and natural assets.



1.5 COMMUNITY TRENDS

In addition to the number of existing kilometres, identifying the physical routes that people currently use for active travel and recreation can help to develop a better understanding of the current context for cycling and trails in the County as well as opportunities for new routes. Using Strava data, current pedestrian and cycling activity was reviewed to understand frequently used routes and where pedestrians and cyclists are currently cycling, walking and engaging in other forms of multi-modal activity in Grey County.

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. It is important to note that Strava is a voluntary tool that is typically marketed and used by those who are engaging in active forms of travel and recreation for fitness purposes and / or long-distance touring trips. As such, it is recommended that Strava be used as a supplementary piece of information with other tools and datasets to understand user habit and preferences for people of all ages, abilities and interests.

Figure 4 illustrates popular routes based on the total activity count from Strava. This data was obtained by the County and includes activity counts that were recorded between January 1 and December 31, 2019. The following colour-scale can be used to interpret the routes illustrated in Figure 4:



Roads and trails without a colour do not have Strava data associated with the route, however, this does not preclude that these routes may be utilized by users that do not use Strava.

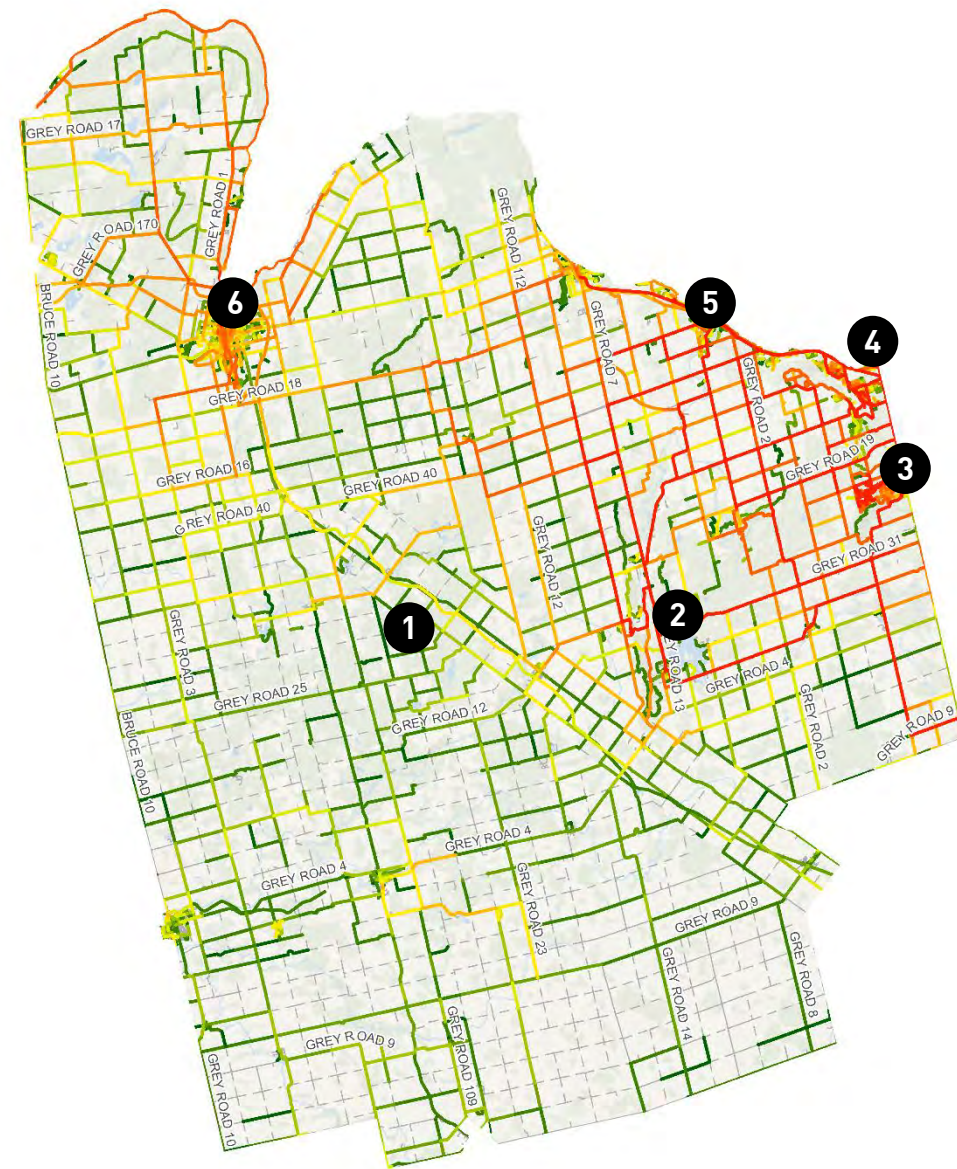
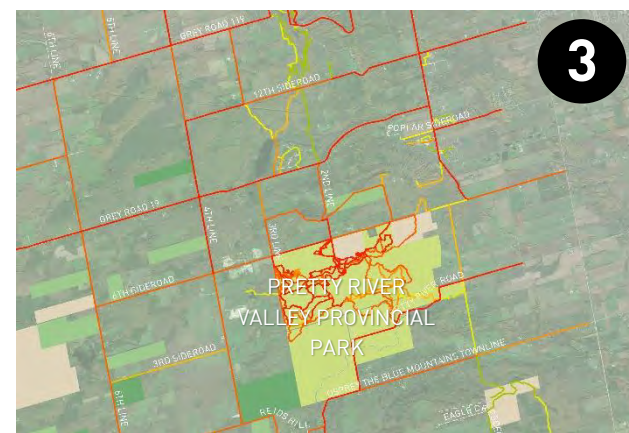
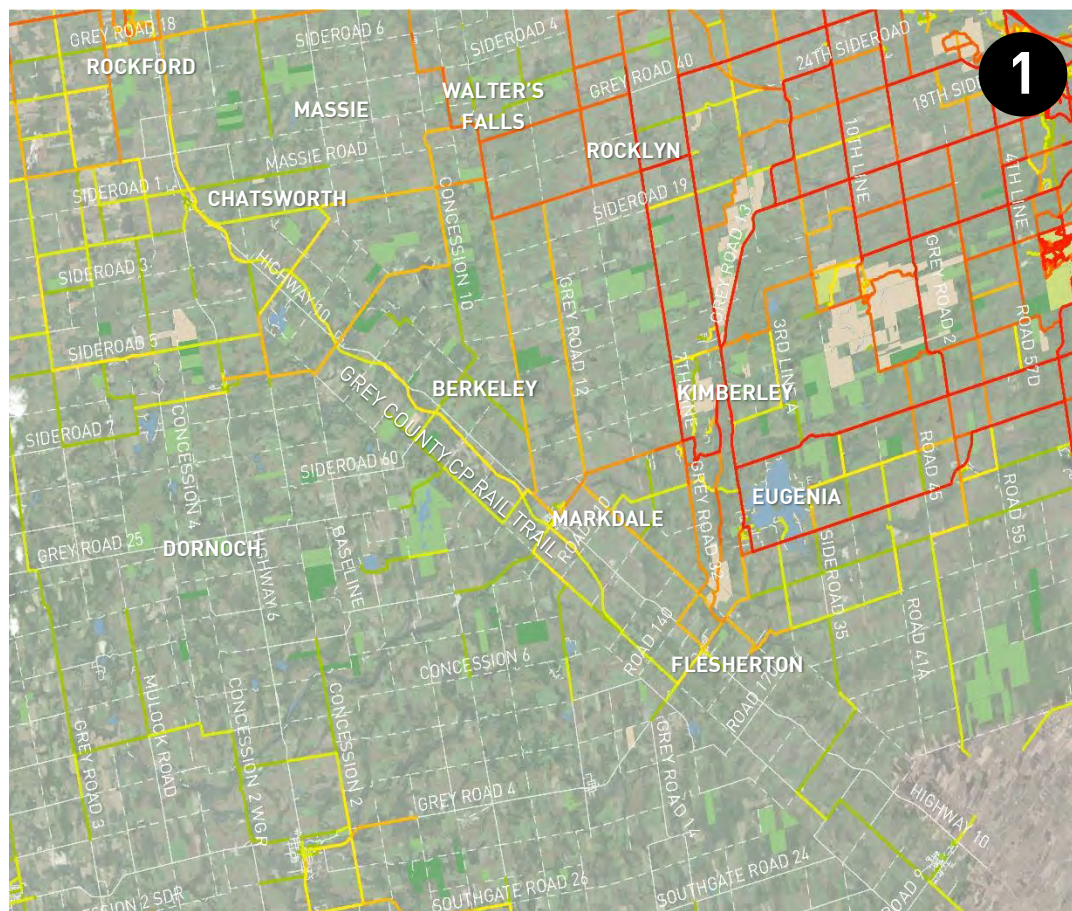







Figure 4 - Popular Routes for Pedestrians and Cyclists
Source: Strava Data provided by Grey County

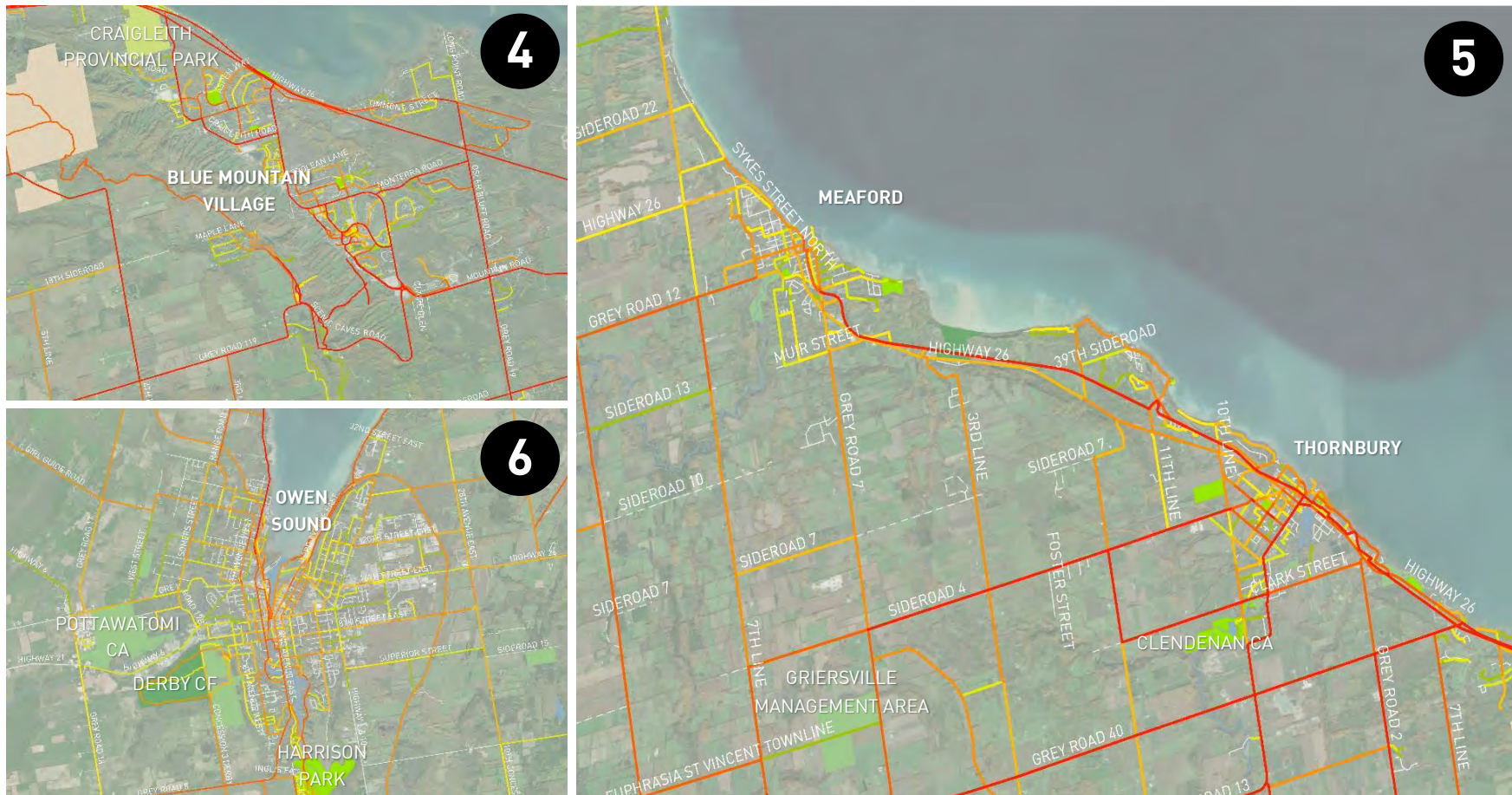
Figure 4 illustrates six activity hotspots in the County. These are mostly located within the built-up urban areas, conservation areas and along regional trail systems. The following graphics provide a snap-shot of each “hotspot” area and key land features that could be perceived as major destinations and trip generators.



- 1** Grey County CP Rail Trail
- 2** Kolapore Uplands
- 3** Pretty River Valley Provincial Park

-  Provincial Park
-  Crown Land
-  County Forest

-  Conservation Authority Land
-  Municipal Park



- | | | | |
|----------|---|---|---|
| 4 | Blue Mountain Village and the Georgian Trail |  Provincial Park |  Conservation Authority Land |
| 5 | Georgian Trail between Thornbury and Meaford |  Crown Land |  Municipal Park |
| 6 | Owen Sound and the Great Lakes Waterfront Trail |  County Forest | |

In addition to these popular routes, data collected from Strava provides a visualization of the origin locations of pedestrians, cyclists and other non-motorized multi-modal users. This information is based on the number of recorded trips that start within a specific geographic area of Grey County.

High origin activity



Low origin activity

Figure 5 illustrates areas that are associated with origin locations for users that recorded their activity between January 1 and December 31, 2018. This information was reviewed to better understand where users are starting their trip, how these areas are connected, potential opportunities to enhance access to these locations, and user patterns during winter and non-winter months.

The colour-scale to the right can be used to interpret the areas illustrated in **Figure 5**. Areas without a colour do not have any associated Strava data, however, this does not preclude the potential that users are not utilizing Strava to record their activity.

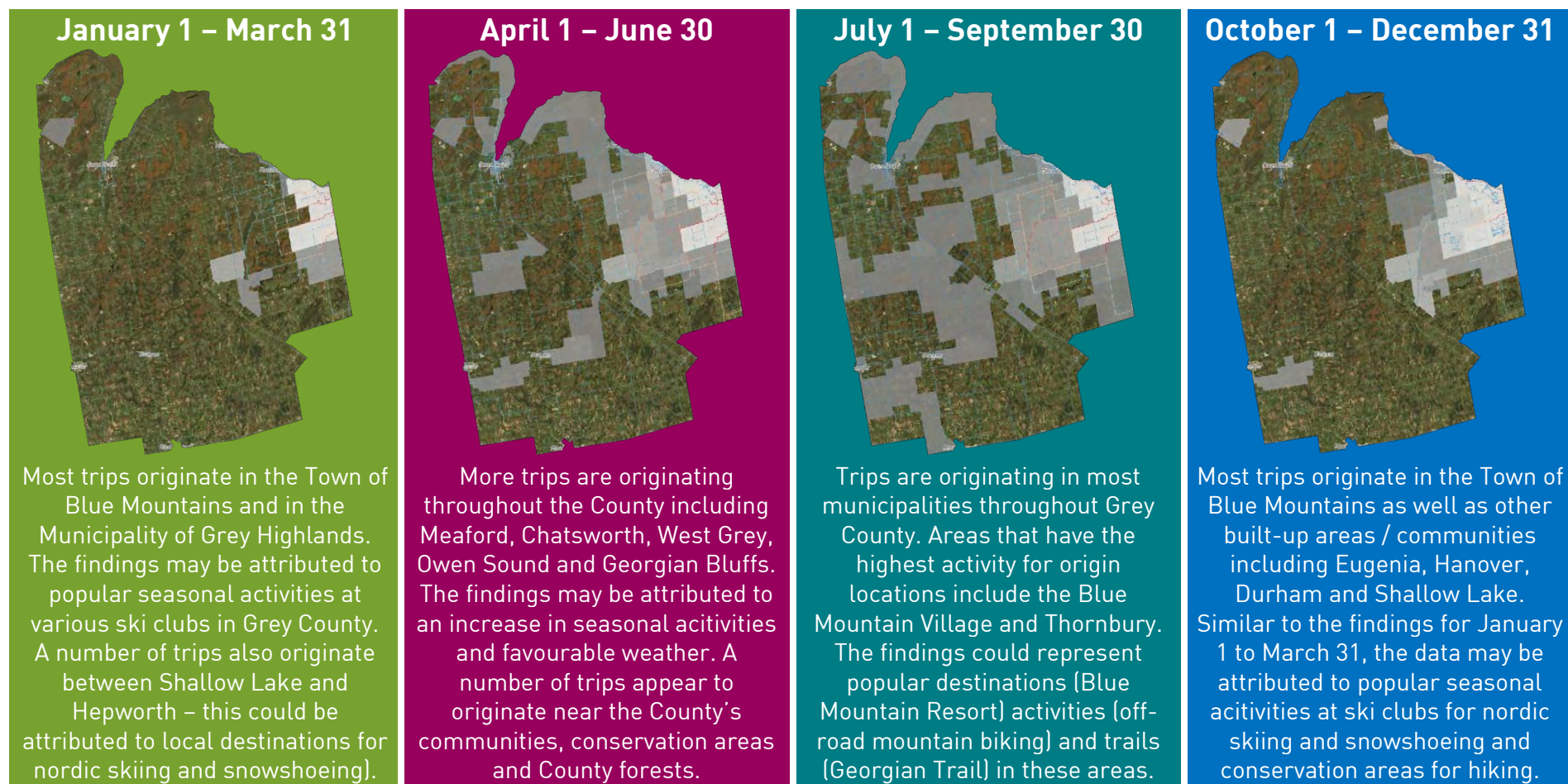


Figure 5 - Origin Activity based on Strava Data

In addition to the Strava data, feedback collected through the various consultation activities during the study process provided insight on popular cycling and trail routes in Grey County. During the second phase of the study process, an online engagement tool was launched to solicit public input on cycling and trails improvements for Grey County. Respondents were asked to “use pins” on an interactive map to provide their comments on six topics: agree, disagree, barrier, missing link, priority, and other comments. Approximately 700 pins and comments were provided which included:

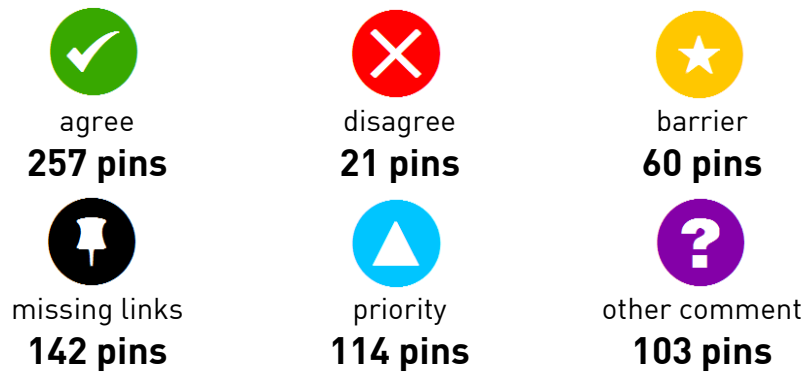


Figure 6 illustrates the location of all pins that were placed as part of the interactive mapping tool. Comments that were received include:

- Many respondents agreed with proposed enhancements along the waterfront and from Owen Sound to Collingwood.
- Many respondents indicated the lack of connectivity between rural communities as a missing link.
- Many respondents indicated the need for clear and more signage as a priority.

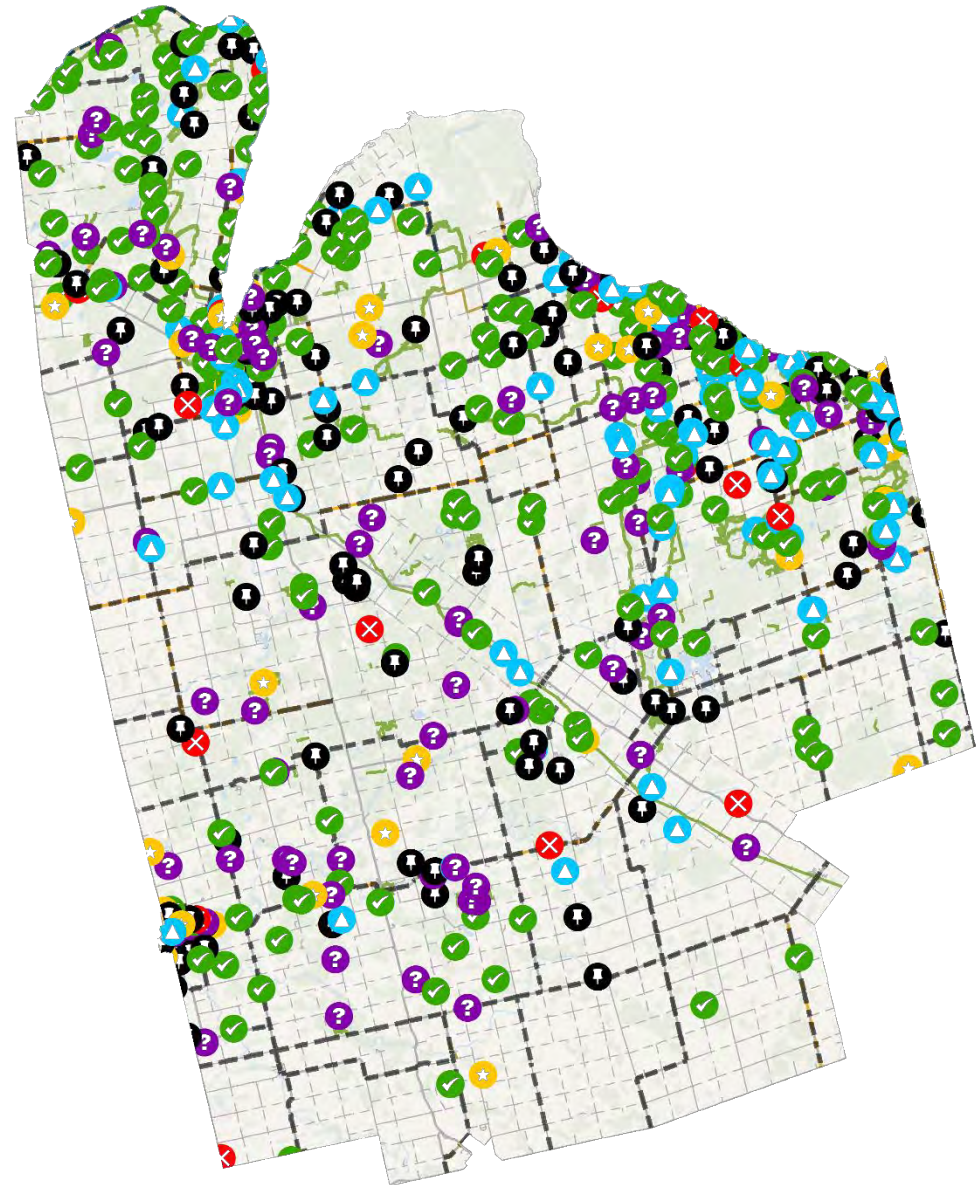


Figure 6 - MetroQuest Results from Interactive Mapping Tool

The input received was used to inform the network development process (see section 2.1) and to better understand user perspective related to cycling and trail issues, opportunities and challenges. A summary of cycling-specific comments that were received over the course of the study and that provide insight on user trends is outlined below.

- ✓ Grey Road 12 is a good road for biking but could use a formal facility.
- ✓ Tom Thomson Lane is a great alternative bike route.
- ✓ Continue to invest and enhance the Great Lake Waterfront Trail along Grey Road 1.
- ✓ Centre Road (Georgian Bluffs) is a great biking route.
- ★ Getting across Highway 26 needs to be a priority.
- ★ Many people don't bike along main roads because the traffic is moving too quickly; providing paved shoulders would encourage more people to traverse between communities.
- ★ Crossing Highway 26 and 21 is difficult; need an east-west route connection between Meaford and Owen Sound.
- 📌 Need a formal facility of Grey Road 17 for a circular loop.
- 📌 Connections needed along Grey Road 9 to connect to Dundalk.
- 📌 Need paved shoulders Grey Road 28 (Hanover) to connect to existing trail system.
- ▲ Add paved shoulders along Grey Road 16 to connect to Chatsworth.
- ▲ Grey Road 119 and 19 are heavily used by cyclists; need paved shoulders.
- ▲ Grey Road 40 to Blue Mountains should be a priority.
- ❓ The Grey County CP rail Trail network presents a real opportunity for tourism, especially given the interest in gravel riding and eco-tourism.
- ❓ Having a cycling route connecting to the hospital (Owen Sound) would be helpful.
- ❓ Grey Road 12 is a good road for cycling but could be enhanced with a paved shoulder.

In addition to these comments, a number of trail-specific comments were received over the course of the study during consultation events. A sample of these comments is provided below.

- **Inadequate parking:** hiking events that would attract more visitors to the County have been curtailed because of lack of parking in the summer but especially in the winter (including the lack of plowing of snow in parking lots and the accumulation of snow on roadsides).
- **Public Education:** interest to help in publicizing the quality and availability of wilderness trails in the County (and the type of users for which the trails are intended).
- **Safety at Road Crossings:** many trails cross busy roads. Help with appropriate signage to reduce the risk to hikers and drivers at trail crossings would be helpful (e.g. recent example of County assistance on Grey Road 2 near the Kolapore).
- **Assistance in Securing the Trail:** there are a number of ways in which planning and legal protocols could be enhanced and applied to assist the securing (through severances, purchases, easements, etc.) of additional portions of the Bruce Trail.
- **Partnerships in maintaining specific trail access points:** the Bruce Trail has a number of access points that are current tourist attractions. Both hikers and other tourists could benefit through a co-operative approach by different levels of government to develop and maintain those sites (e.g. recent approach recently tried for Hogg's Falls).
- **Assistance in funding major projects:** given the joint interests of the Bruce Trail Conservancy and government agencies related to tourism, economic development and physical and mental health, there might be instances in which assistance could be mutually beneficial. Interest to explore opportunities in which resources and programs might be available to assist the other.



1.6 PLAN PRINCIPLES

A key component of any master plan process is the development of a long-term vision statement. The vision statement is intended to reflect the County's aspirations for cycling and trails, and it meant to be achieved through implementation of the master plan. The County's vision for cycling and trails has been shaped by input received from stakeholders, members of the public, County staff and member municipalities, received over the course of the study.

A vision statement is supported by a set of objectives that are intended to be action-oriented and shape the recommendations, strategies and initiatives contained in the master plan. The master plan vision and objectives were developed using County staff, municipal staff and stakeholder input collected at the first Stakeholder Workshop held on December 6, 2018. The vision and set of objectives were later presented to the public during the March 29, 2019 public open house.

The following pages present the vision and set of objectives for the Grey County Cycling and Trails Master Plan. The recommendations and actions identified in the plan are meant to help achieve these objectives and ultimately attain the County's vision for cycling and trails. For a complete look at how each recommendation contained in the master plan works towards one or more of the objectives, refer to section 4.7.

why develop a vision statement...

A vision statement is established to identify a high-level aspirational goal that reflects the desired outcomes of the Cycling and Trails Master Plan.

why develop a set of objectives...

A set of objectives are established to identify action-oriented statements that explain how the vision for the Cycling and Trails Master Plan can be achieved.

how will the vision and objectives be used...

The vision and objectives provide the basis for future decision making and serve as a guide for short and long-term actions to enhance cycling and trail opportunities in Grey County.

A group of cyclists wearing helmets and casual clothing are gathered in a forest. In the background, there are wooden signs. One sign on the left is titled 'ST. VINCENT FOREST 40' and lists 'RECREATION OPPORTUNITIES'. Another sign in the center is titled 'GREY COUNTY MANAGED FOREST' and features a map. The scene is set on a dirt path surrounded by lush green trees.

Grey County's vision for cycling and trails:

Grey County with its nine member municipalities, surrounding regions and agency partners together support the development of a plan that identifies a complete, continuous and connected network of high-quality cycling and trail routes to accommodate varying user types of all ages and abilities (walkers, hikers, cyclists, skiers, equestrians, etc.), and opportunities to explore the County's natural landscape in a safe and enjoyable way all year-round.

The Cycling and Trails Master Plan aims to enhance the quality of life for County residents by providing low-cost access and options to engage in physical activity to improve health and social well-being. The plan is also intended to improve opportunities for economic development and tourism by situating Grey County as a leader of cycling and trails in Ontario by connecting member municipalities, key destinations and surrounding regions.

The objectives:



1. Design a **continuous and connected network** by identifying routes and facilities that are considered comfortable and safe for users of varying ages and abilities.



2. Improve **accessibility** and **inclusivity** by identifying routes and facilities between and within the County's member municipalities and communities, that accommodate the needs of various users.



3. Provide **recreational, commuting and touring opportunities** within the County, its member municipalities and to surrounding regions to increase the quality of life for residents.



4. Provides connections to areas of **natural and cultural significance** to ensure the County's unique character is reflected in future initiatives.



5. Support the **increased use of active modes** of travel and recreation by identifying routes that connect to major destinations, key services and surrounding regions.



6. Identify **tools, policies and programs to support year-round use** of cycling, trails and active transportation infrastructure.



7. Identify a network as well as **potential partners and programs** to support local **economic development and tourism initiatives**.



8. Support the development of **clear, consistent and branded communications** to enhance promotion, safety and increased use of cycling, trails and other active forms of travel and recreation.



9. Provide the County with **tools, strategies and recommendations** to guide future planning, design, implementation and operations of safe and comfortable infrastructure and meaningful programming.



A photograph of a cyclist riding on a paved path next to a lake. The cyclist is wearing a black and pink jersey and a black helmet. The path is bordered by a metal guardrail on the left and a grassy area on the right. The lake is in the background, with trees and a clear sky.

CHAPTER 2

The Network

A key component of the Cycling and Trails Master Plan is the physical routing – the proposed routes, facility types and alignment that is intended to form a preferred cycling and trails network. This network builds upon the already extensive system of regional trails and existing on-road infrastructure that can be found in Grey County including existing paved shoulders, off-road routes and on-road signed trail networks.

The process that was used to identify the County's cycling and trails network was an iterative approach and shaped by input received from members of the public, municipal partners, stakeholders and County staff. The recommendations contained in this section reflect the needs of residents as well as the County's future aspirations for cycling and trails.

The information within this section is not intended to be prescriptive or a commitment to projects. Rather, it is intended to provide documentation and rationale for the process that was undertaken to identify and confirm the preferred routes and facility types. The proposed cycling and trails network is intended to be flexible and adapt to opportunities, resources and modifications that may arise in the future to guide County staff and its municipal partners as they move from the planning and design stages through to construction.

2.1 DEVELOPING THE NETWORK

The process used to develop the County’s preferred cycling and trails process consisted of four steps. Each step was informed by input collected from members of the public, stakeholders and County staff over the course of the study. An overview of the network development process including each step is provided in **Figure 7**. A detailed overview of the process and outcome from each step is documented in the following sections.

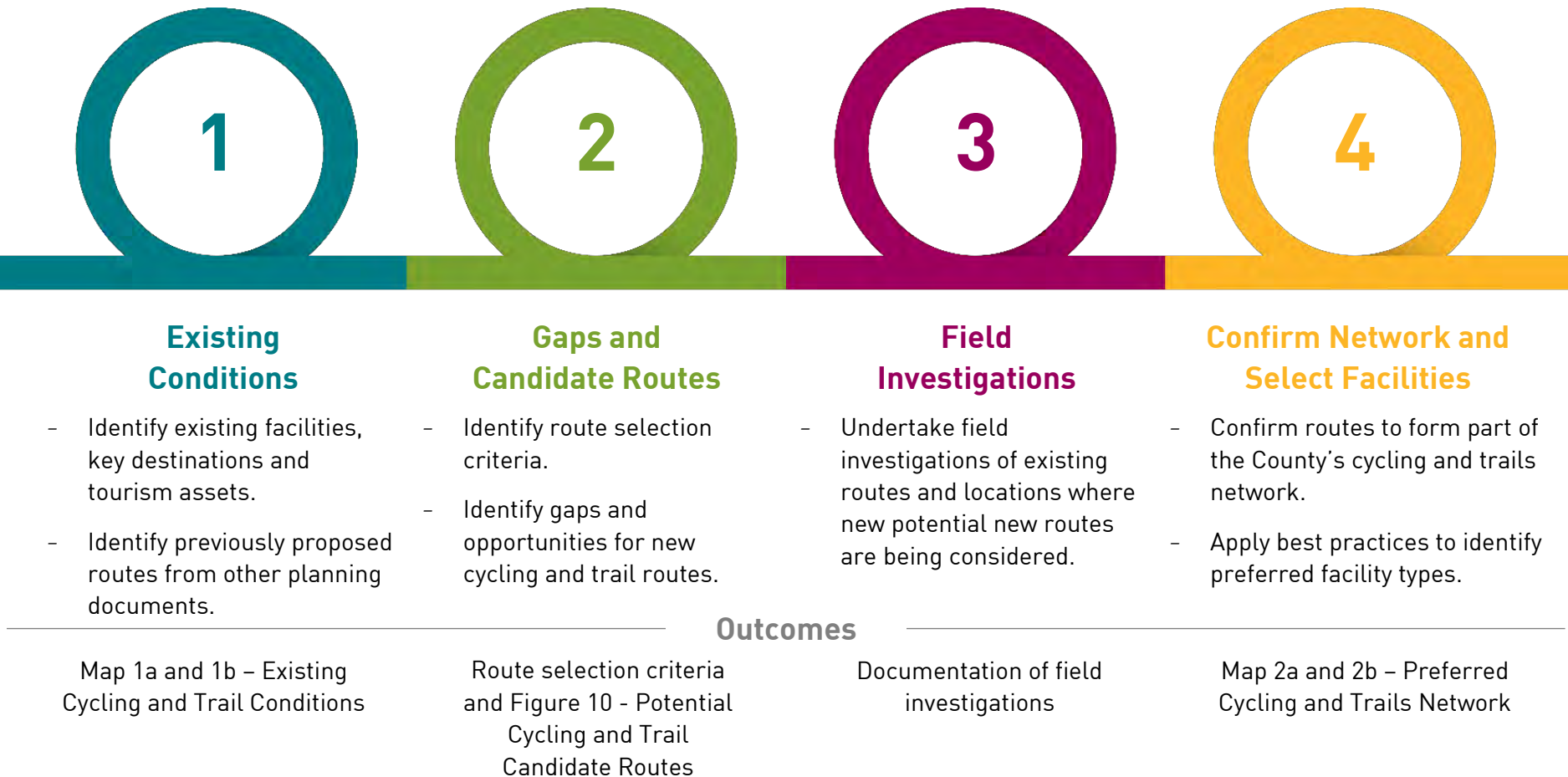


Figure 7 - Cycling and Trails Network Development Process

STEP 1: EXISTING CONDITIONS

What was done?

Information was gathered from Grey County, its member municipalities and stakeholders to develop a database of spatial information – a geographic information systems (GIS) database. The database included information for:

- Existing on and off-road routes;
- Previously proposed routes;
- Regional trail systems;
- Key destinations and tourism assets;
- Land use features; and
- Transportation features.

The database was updated on an on-going basis during the study process to reflect new information and observations noted by the public, stakeholders, County staff and the study team. The database was used to develop mapping which illustrates the existing cycling and trail conditions within Grey County as well as community and tourism destinations, land use features and transportation features. A summary of existing network features in Grey County is presented in **Figure 8**.

What are the outcomes?

Map 1a – Existing Cycling and Trails Conditions
(County-wide map)

Map 1b – Existing Cycling and Trails Conditions
(Built-up Areas map)

Figure 8 - Summary of Existing Network Statistics








Existing Network		
On-road routes		284 km
Off-road routes		592 km
Regional Trail Systems		
Bruce Trail		426 km
Grey County CP Rail Trail		74 km
Great Lakes Waterfront Trail		144 km
Province-wide Cycling Network		186 km
Georgian Trail		34 km
Tom Thomson Trail		85 km
Georgian Bluffs Trail		16 km
Key Destination and Tourism Assets		
	Beaches	13
	Bike shops / rentals	6
	Scenic Lookouts	14
	Waterfalls	8
	Tourist Information Centres	8
	Trail Access Point	94
	County Forest Access Point	86

Figure 8 - Summary of Existing Network Statistics



Map 1a

Grey County

Existing Cycling and Trail Conditions
Grey County Cycling and Trails Master Plan | October 2020

Legend

Existing Routes

- Paved Shoulder
- Partially Paved Shoulder
- Signed Route
- Off-road Trail¹
- Edge Line
- In-boulevard Pathway

Regional Trail Systems

- Bruce Trail
- Other Regional Route²

Key Destinations

- Beach
- Bike Shop / Rental
- Scenic Lookout
- Waterfall
- Tourist Information
- Trail Access Point (Parking)
- County Forest Access Point

Transportation Features

- Provincial Road
- County Road
- Municipal Road (paved)
- Municipal Road (gravel)
- Connection to Surrounding Municipality
Refer to list below for description of connections

Land Use Features

- Provincial Park
- Crown Land
- County Forest
- Conservation Authority Land
- Municipal Park
- School
- Hospital
- Waterbody
- Municipal Boundary

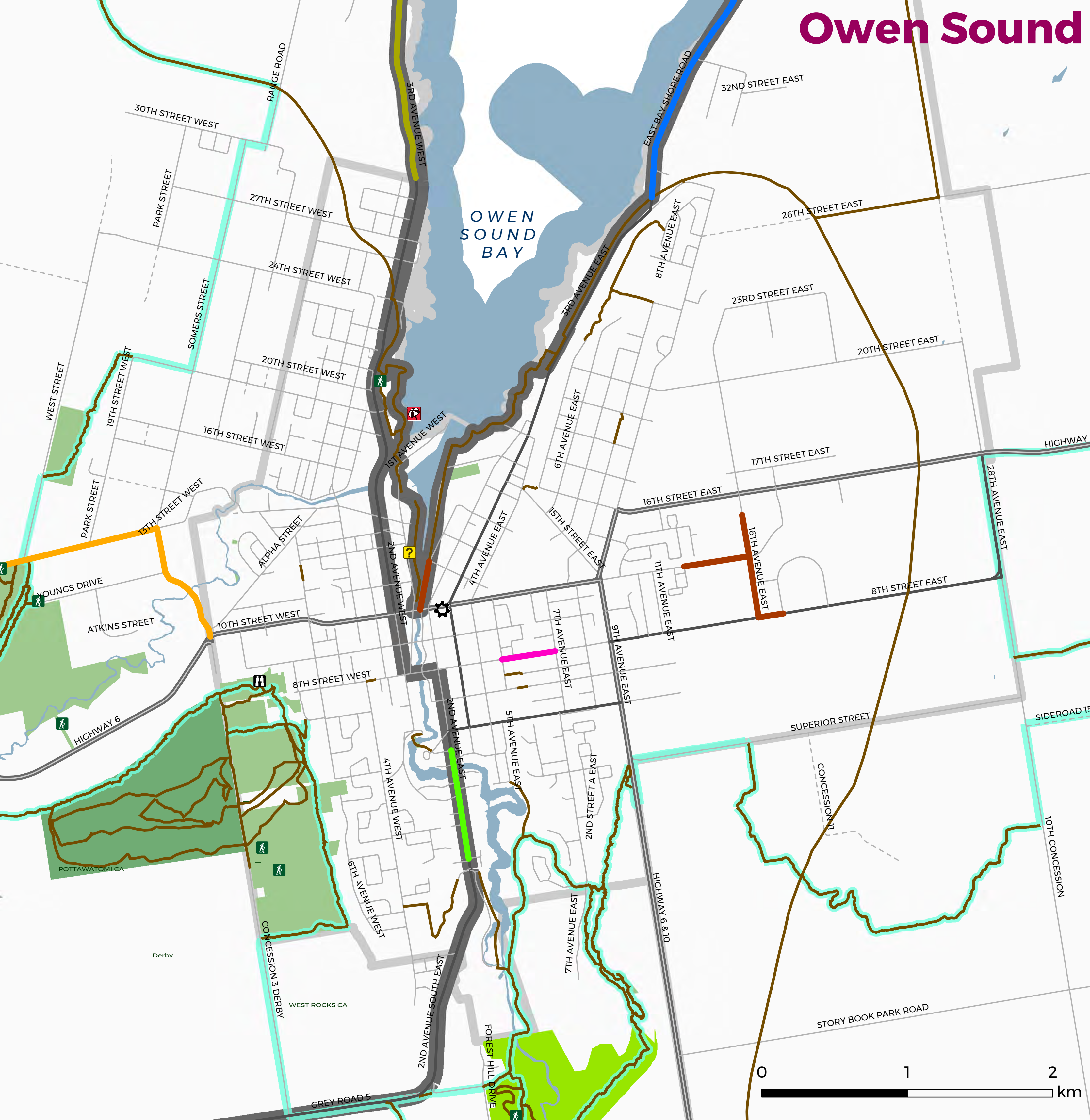
Notes:

- Includes routes intended for multi-use purposes including walking, hiking, cycling, cross-country skiing and equestrian use.
- Includes the CP Rail Trail, Waterfront Trail, Georgian Bay Cycling Route and the Province-wide Cycling Network.

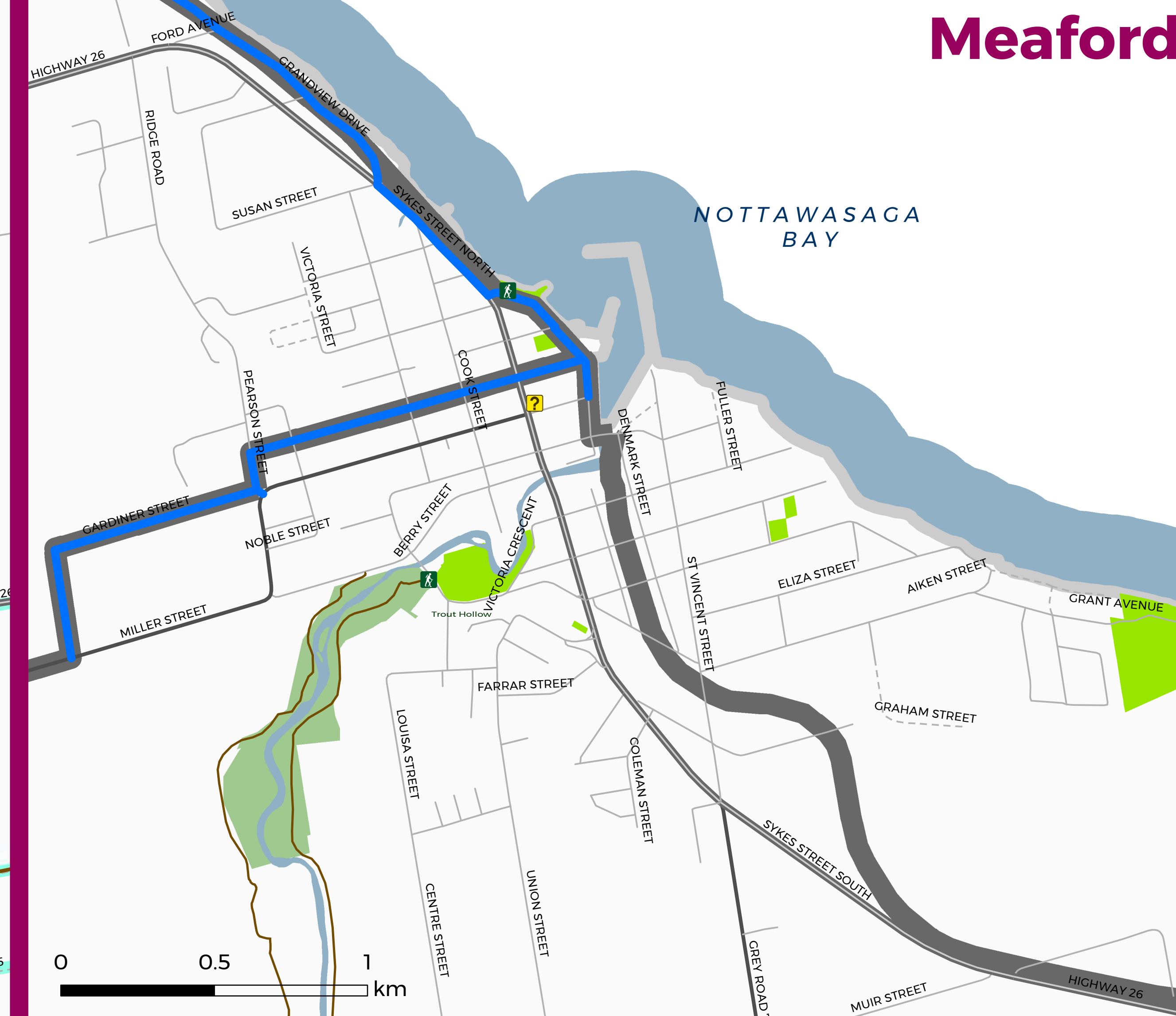
Connections to Surrounding Municipalities

- 1-5 proposed on-road route (Simcoe County TMP 2014)
- 6-7 proposed paved shoulder (Dufferin County AT Master Plan 2010)
- 8 proposed off-road trail (Dufferin County AT Master Plan 2010)
- 9 to Arthur, Wellington County
- 10 to Minto, Wellington County
- 11 to Chesley, Bruce County
- 12 to Tara, Bruce County
- 13 to Park Head, Bruce County
- 14 to Wiarton, Bruce County

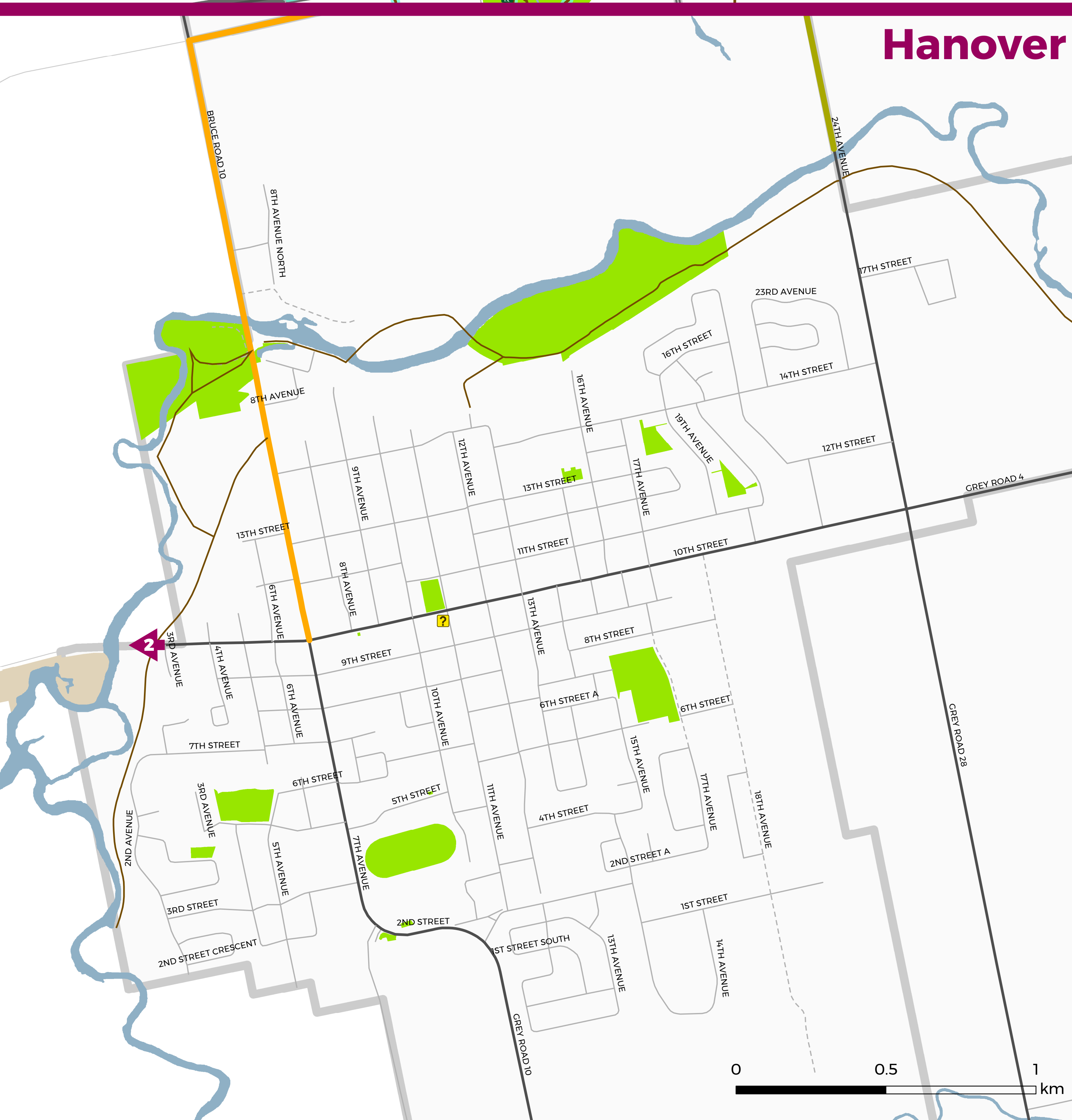




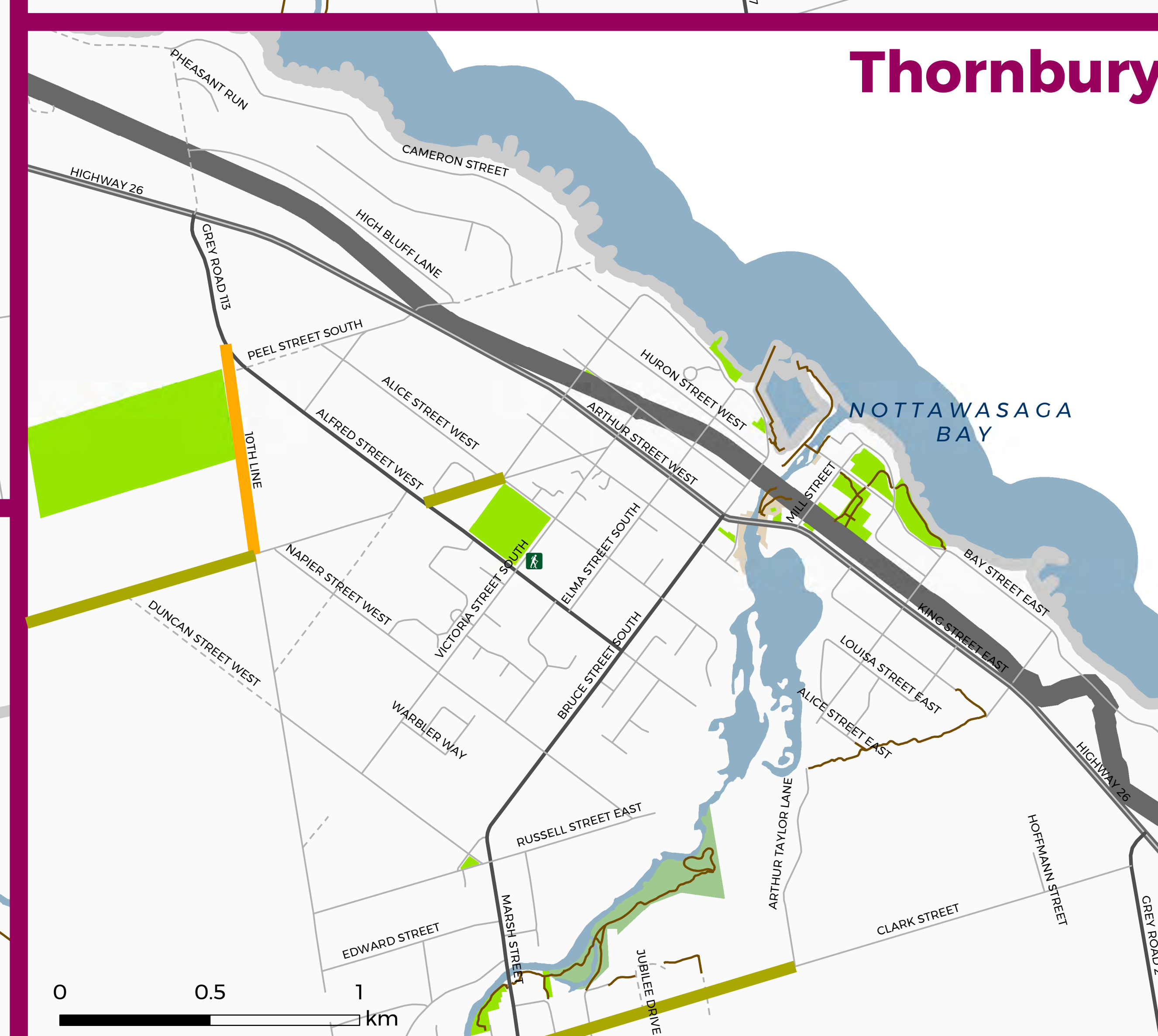
Owen Sound



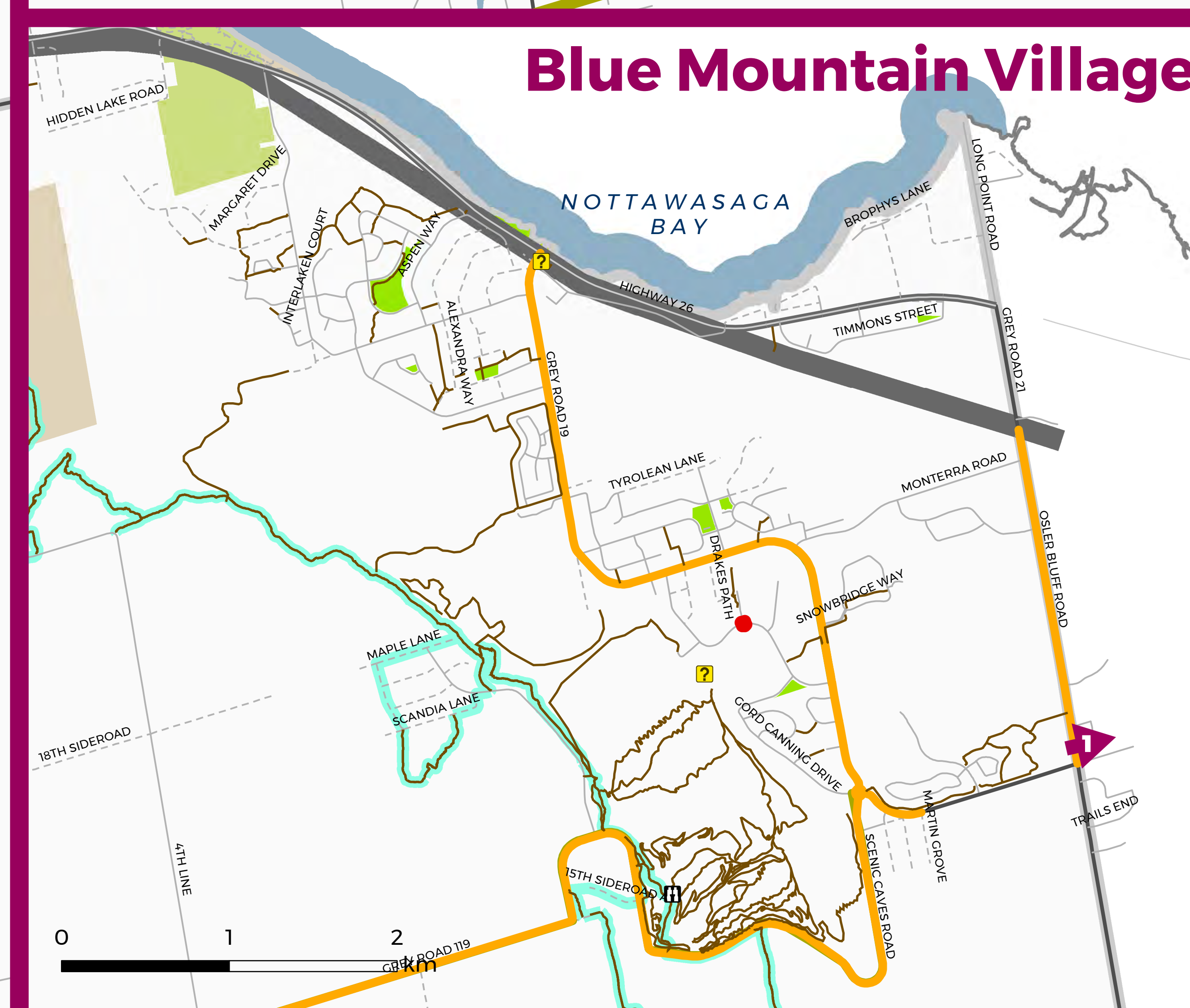
Meaford



Hanover



Thornbury



Blue Mountain Village

Map 1b Built-up Areas

Existing Cycling and Trail Conditions
Grey County Cycling and Trails Master Plan | October 2020



Legend

Existing Routes

- Paved Shoulder
- Partially Paved Shoulder
- Signed Route
- Off-road Trail¹
- Edge Line
- In-boulevard Pathway

Transportation Features

- Provincial Road
- County Road
- Municipal Road (paved)
- Municipal Road (gravel)
- Connection to Surrounding Municipality
Refer to list below for description of connections

Regional Trail Systems

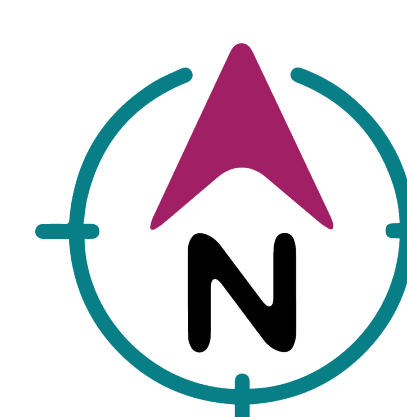
- Bruce Trail
- Other Regional Route²

Land Use Features

- Provincial Park
- Crown Land
- County Forest
- Conservation Authority Land
- Municipal Park
- School
- Hospital
- Waterbody
- Municipal Boundary

Key Destinations

- Beach
- Bike Shop / Rental
- Scenic Lookout
- Waterfall
- Tourist Information
- Trail Access Point (Parking)
- County Forest Access Point



Notes:
1. Includes routes intended for multi-use purposes including walking, hiking, cycling, cross-country skiing and equestrian use.
2. Includes the CP Rail Trail, Waterfront Trail, Georgian Bay Cycling Route and the Province-wide Cycling Network.

Connections to Surrounding Municipalities

- ¹ proposed on-road route (Simcoe County TMP 2014)
- ² to Walkerton, Bruce County

In addition to Maps 1a and 1b, the County's cycling loops were reviewed to understand roads and trails that are already promoted by the County as desirable routes for cyclists. These cycling loops are illustrated on the County's map of bike routes ([here](#)). Though most of these cycling loops do not have a formal facility, they were used as a starting point of the network development process. The County's cycling loops are organized into three categories – easy, moderate and advanced – and typically include a series of roads and / or trails that take advantage of the surrounding landscapes and views. **Figure 9** illustrates the County's cycling loops.

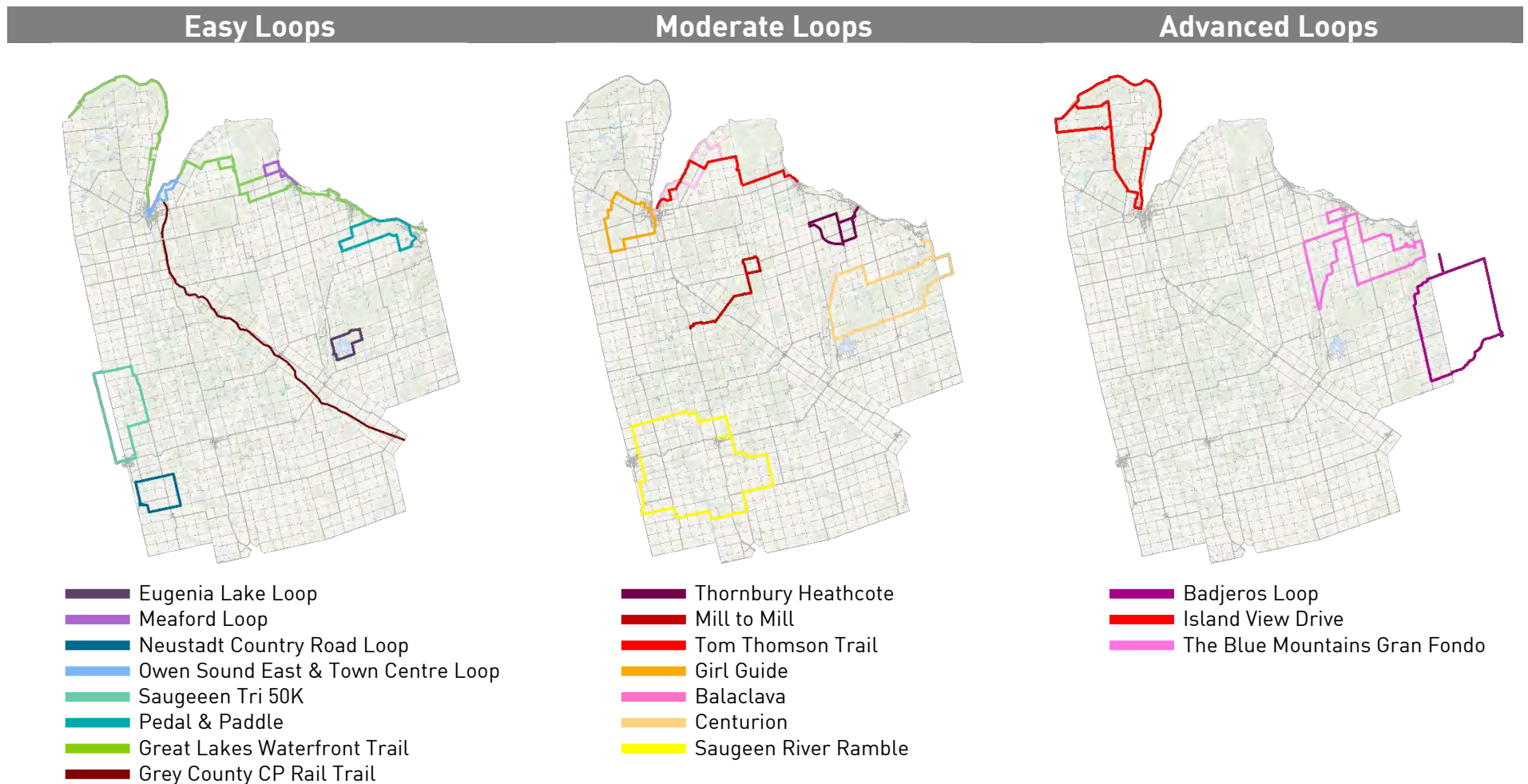


Figure 9 - Overview of Grey County's Cycling Loops

STEP 2: GAPS AND CANDIDATE ROUTES

What was done?

A set of criteria were established to help identify potential new routes, specifically on-road cycling routes or off-road multi-use trails, that could form part of the County's cycling and trails network. These criteria reflect current planning and design principles and are intended to inform the selection of routes that help to achieve the master plan objectives and the County's vision for cycling and trails.

Table 1 presents the route selection criteria and associated considerations / questions. These criteria are intended to be used following adoption of the master plan, as new opportunities arise and / or changes to the cycling and trails network are being investigated.

Building upon step 1 and the route selection criteria, potential new routes (or candidate routes) were identified to complete gaps in the existing and previously proposed cycling and trails network. Potential new routes were assessed using the criteria in **Table 1** and informed by input received from members of the public, stakeholders and County staff.

All candidate routes that were identified and considered to form part of the County's cycling and trails network are illustrated in **Figure 10**. These routes were further investigated as part of step 3 to confirm their appropriateness and subsequently refined in step 4 to form the preferred cycling and trails network for the County.

What are the outcomes?

Figure 10 - Potential Cycling and Trail Candidate Routes

Table 1 - Route Selection Criteria for the Cycling and Trails Network

Criteria	Consideration
Connectivity and Directness	<ul style="list-style-type: none"> - How directly does the route connect to key destinations? - Is the candidate route intersected by other cycling / trail routes? - Does the route form part of a corridor that enables users to travel a significant distance through the County? - Does the route facilitate or enhance connections with trail systems that extend beyond the county (e.g. Bruce Trail, others)
Access and Potential Use	<ul style="list-style-type: none"> - Does the route connect to residential areas, employment areas, commercial, recreational or institutional destinations? - Are there routes that already exist to these destinations or along the corridor?
Attractive and Aesthetic	<ul style="list-style-type: none"> - Is there scenic value that enriches the user experience along the route? - Is there potential for the route to provide access to natural, historic or cultural areas within the County? - Does the route provide a "stress-free" experience to enjoy surrounding natural area?
User Comfort and Safety	<ul style="list-style-type: none"> - Can an appropriate facility be implemented that would appeal to a broad range of users and abilities? - Does the route reduce potential conflict for all users?

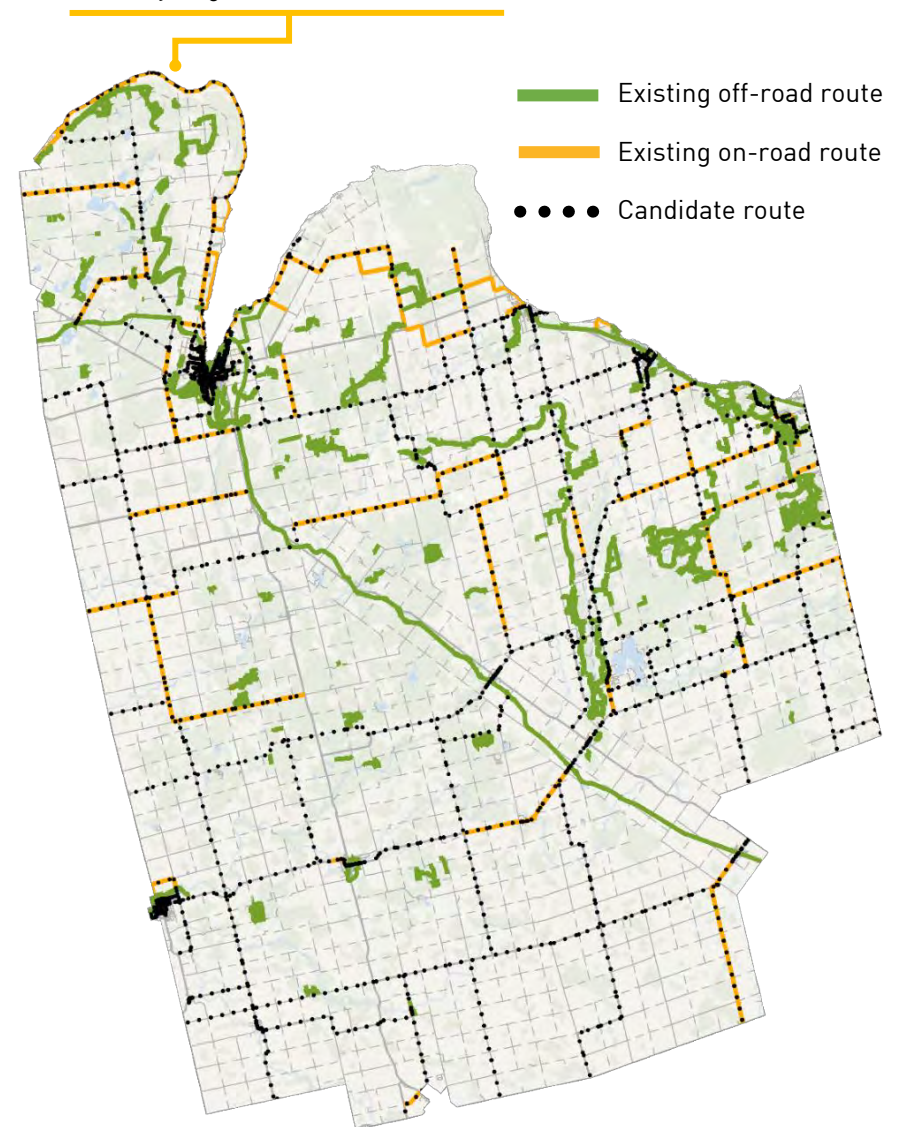
Table continues on the next page.

Table 1 - Route Selection Criteria for the Cycling and Trails Network (cont'd)

Criteria	Consideration
Environmental Impact	<ul style="list-style-type: none"> - Can the route be implemented in such a way that impact to adjacent natural heritage features can be appropriately mitigated and / or minimized?
Road Classification	<ul style="list-style-type: none"> - Based on the roadway class and conditions, is it reasonable that it will be conducive to cycling when an appropriate facility is implemented?
Cost	<ul style="list-style-type: none"> - Do the social, economic, environmental, and health benefits of providing a route in this location offset the cost to implement the route?
Attracting Future Users	<ul style="list-style-type: none"> - Is there significant potential to increase the volume of cyclists, trail users or other non-motorized users using the candidate route in the future? - Are there sufficient routes and are the proposed facility types appropriate for varying types of users?
Tourism	<ul style="list-style-type: none"> - Does the route support local and / or regional tourism initiatives? - Does the route provide access to tourism destinations in municipalities adjacent to Grey County?

A majority of the candidate routes identified are on-road with the exception of select off-road locations where a proposed multi-use facility was considered. It is recommended that the County continue to work with its partners to identify future opportunities to improve connections to off-road single-track, wilderness trails (e.g. links between and to / from wilderness trail systems such as Kolapore Wilderness Trails, Bruce Trail, etc.).

All existing facility types were considered and included in the County's cycling and trails network.



This figure does not represent the preferred cycling and trails network for Grey County – it is only intended to show the progress of identifying routes through the study process.

Figure 10 - Potential Cycling and Trail Candidate Routes

STEP 3: FIELD INVESTIGATIONS

What was done?

Field investigations were undertaken to better understand the conditions and context of locations where there are existing cycling routes, locations where routes have been previously proposed in past planning documents, and locations where potential new candidate cycling routes (see step 2) were identified through the study process.

Photos and information were documented for each route and location investigated, including posted speed, observed traffic volume, roadway width, on-street parking (within the built-up areas), surrounding land uses and local destinations. **Figure 11** illustrates the database of all geo-referenced photos taken during the field investigations. Field investigations were supplemented by a desktop review allowing the team to revisit the candidate routes, to make sure they could be suitable for the addition of a cycling or trail facility.

The information gathered during field investigations and the desktop review, informed the selection of potential routes for the County's cycling network (see step 4) and preferred facility types (see step 5). Field observations were also used to help identify potential locations where consideration could be given to enhance on and off-road route crossings.

What are the outcomes?

Google Earth KMZ file of geo-referenced photos (Figure 11)

Database of field observations and comments contained within **Appendix D**



Figure 11 - Database of photos from field investigations

STEP 4: CONFIRM NETWORK AND SELECT FACILITIES

What was done?

The selection of routes to form part of the County's cycling and trails network was informed by the findings from steps 1 to 3 as well as input received from County staff, municipal staff, stakeholders and member of the public. In addition, the following factors were assessed to further refine the preferred routes for the County's cycling and trails network:

- Existing road right-of-way;
- On-street parking;
- Anticipated traffic volume;
- Posted speed; and
- Sightline constraints .

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 Book 18: Cycling Facilities.

The first step of the facility selection tool is to determine the appropriate level of separation for an on-road facility based on operating speed (how fast motor vehicles are travelling on the road) and traffic volume (how many vehicles are on the road). Ontario Traffic Manual Book 18 is currently being updated and this step has now been refined to take into consideration different thresholds for levels of separation based on the road types: rural roads or urban / suburban roads. For example, the need for more separation will be identified on roads that have lower traffic volumes and speeds compared to what is identified in the 2013 edition of Ontario Traffic Manual Book 18.

The outcome of Step 1 is not conclusive by itself. It is important that the pre-selected facility types be validated through Step 2 and Step 3 of the facility selection tool. The three-step facility selection tool is presented in **Figure 12**. It is recommended that County staff use the forth-coming update to Ontario Traffic Manual Book 18 as the primary design reference when moving forward with the planning and designing cycling and trails infrastructure in the future.

In addition, special consideration was given to proposed routes on roadways that have existing partial paved shoulders (such as existing paved shoulders with a width of 1.5 metres or less). County staff assisted in the identification of existing partial paved shoulders and possible design solutions for each road that has partial paved shoulders. In total, four different options were considered when assessing paved shoulders:

Existing partial paved shoulders	1. No change, keep partial paved shoulder as is.
	2. Re-mark / narrow travel lanes to achieve fully paved shoulder.
Proposed fully paved shoulders	3. To be implemented in conjunction with future road construction projects.
	4. To be implemented in conjunction with long-term road construction projects.

Additional details on each option for paved shoulder implementation is provided on page 51. The outcomes from step 4 of the network development process are documented in section 2.2.

Ontario Traffic Manual Book 18 Step 1: Pre-selection facility type options

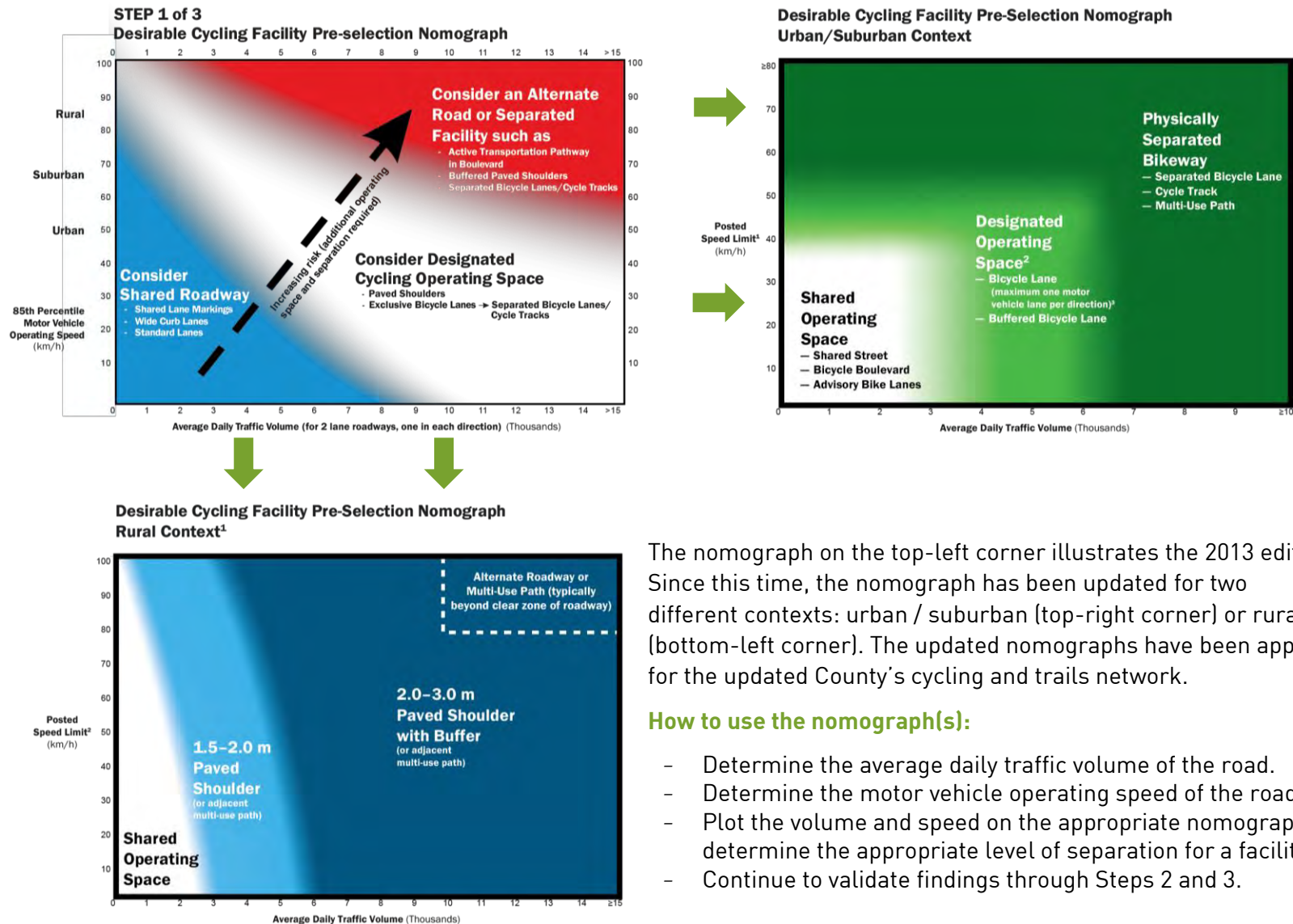
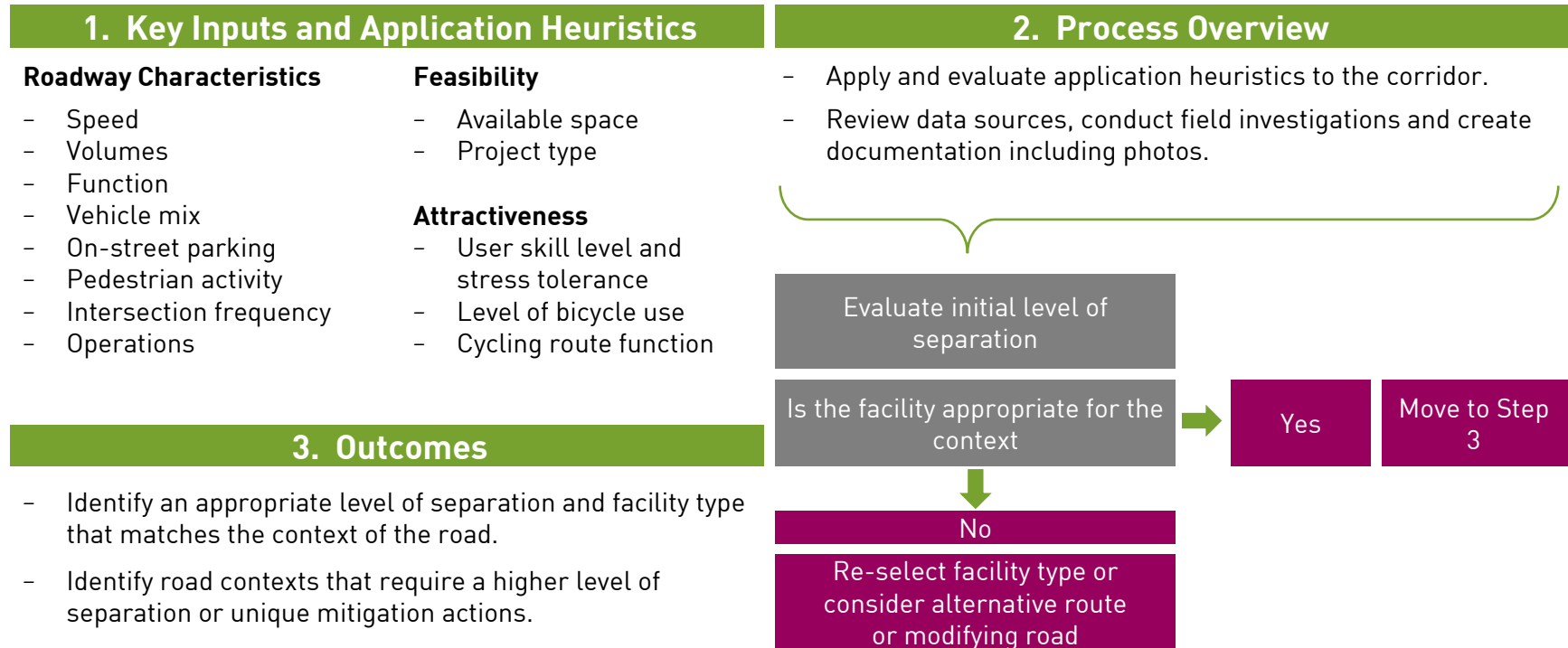


Figure 12 - Ontario Traffic Manual Book 18 Three-Step Facility Selection Process

Ontario Traffic Manual Book 18 Step 2: Detailed and contextual evaluation

In Step 2, practitioners should conduct desktop reviews and field investigations to better understand the context of the corridor. The intent is to have sufficient evidence to confirm whether or not the level of separation and facility type pre-selected in Step 1 are suitable for the context of the roadway. A set of application heuristics link specific site conditions to appropriate facility types and supplementary design features.



Ontario Traffic Manual Book 18 Step 3: Detailed and justify

- If the result of Step 2 differs from the level of separation and facility type options in Step 1, prepare a rationale for selecting a different facility type or separation option.
- Identify the specific application heuristics that were applied and reviewed in detail to come to a conclusion and rationale.
- Identify potential design treatments and enhancements that may mitigate potential issues identified through the review of the application heuristics.

2.2 GREY COUNTY CYCLING AND TRAILS NETWORK

In total, the Grey County cycling and trails network is made up of 1609 kilometres including 876 kilometres of existing routes and 733 kilometres of proposed routes. A breakdown of the cycling and trails network by facility type is provided in **Table 2**. Detailed information on each facility type included in the network, is provided in section 3.1.1.

Maps 2a and 2b illustrates the County's preferred cycling and trails network by facility type. A graphic representation of the network distribution by jurisdiction and location are illustrated on the following pages.

Table 2 - Network Breakdown by Facility Type and Length

Facility Type	Existing (km)	Proposed (km)	Total (km)
Paved Shoulders	95	236.7	331.7
Partial Paved Shoulders	113	0	113
Signed Routes	73.3	423.6	496.9
Off Road Trails	592	1.7	593.7
Edge Lines	0.8	4.5	5.3
Bike Lanes	0.4	3.9	4.3
Buffered Bike Lanes	0	0.9	0.9
Buffered Paved Shoulders	0	60.5	60.5
In-boulevard Pathways	1.7	1.4	3.1
Total	876.2	733.2	1609.4

The recommended network is intended to be a blueprint for the implementation of cycling routes and trails throughout Grey County, and should be used as a guide for future decision-making by those responsible for the implementation including County staff and its municipal partners. The recommended cycling and trails network is also intended to be flexible so new opportunities that arise in the future can be accommodated in the network. This flexibility is also intended to accommodate the addition of routes and / or revision of facility types as the network evolves over time, including upcoming updates to the County's Capital Works Program.

Signed routes are located in both rural and urban / built-up areas. Additional details on signed routes and what these can look like in Grey County, are provided on page 52.

Network breakdown by jurisdiction

Refers to the length of proposed routes that are under the jurisdiction of the County, its member municipalities and the Province (Ministry of Transportation Ontario).

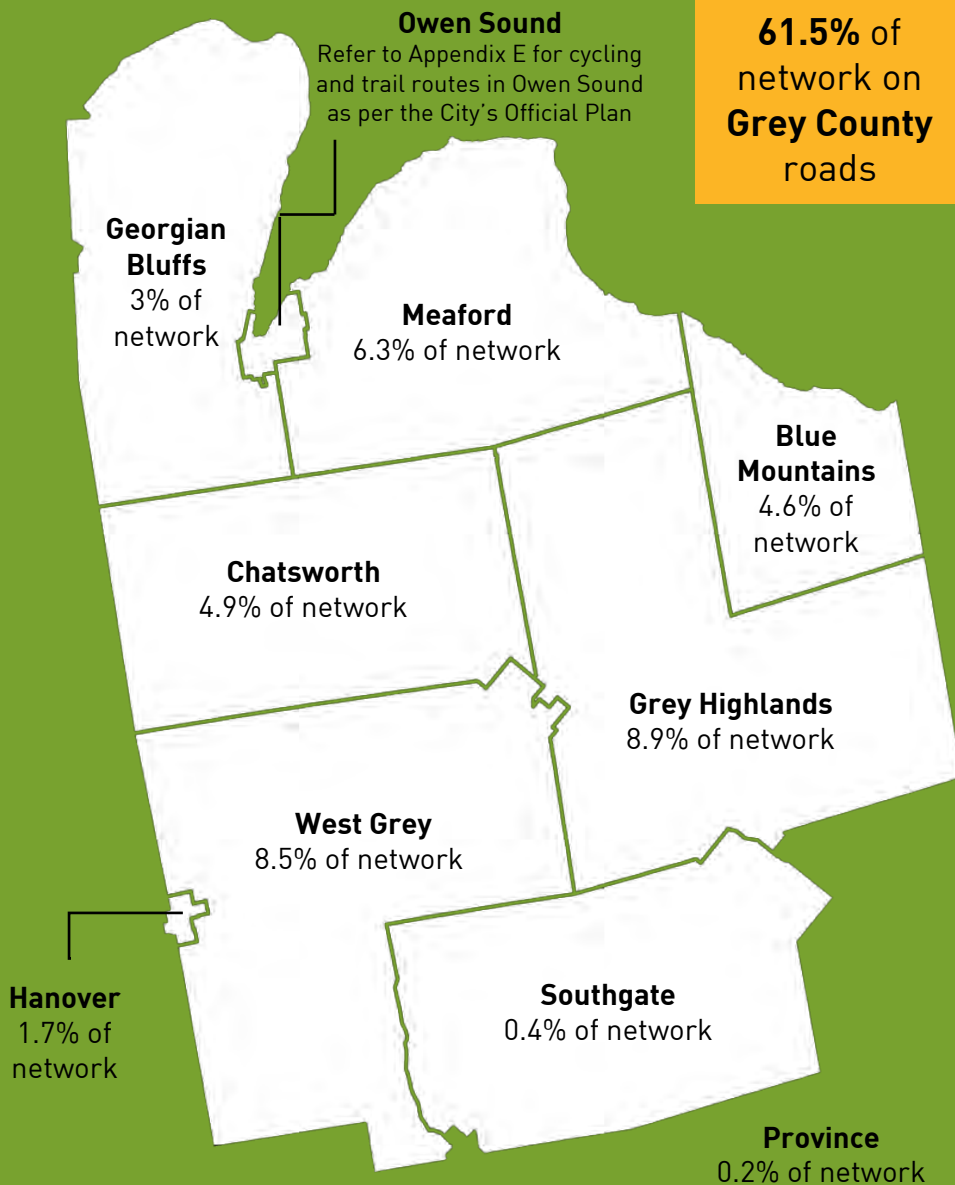


Figure 14 - Network Breakdown by Jurisdiction

Network breakdown by location

Refers to the length of proposed routes that are located within each member municipality and the distance of County-owned routes within each municipality.

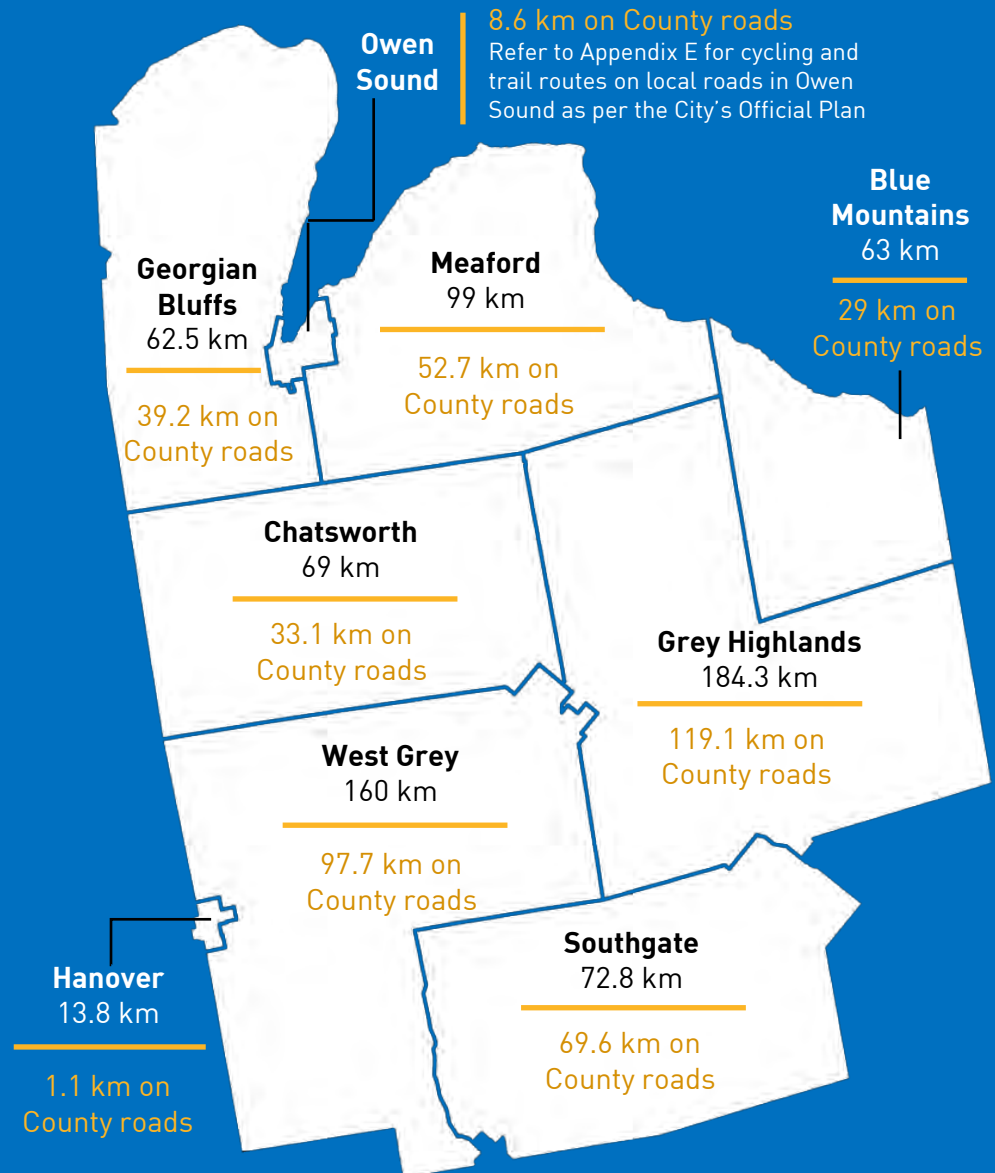


Figure 13 - Network Breakdown by Location



Map 2a Grey County

Preferred Cycling and Trails Network
Grey County Cycling and Trails Master Plan | October 2020

Legend

Draft Network

Existing	Proposed	
		Paved Shoulder ¹
	N/A	Partially Paved Shoulder
		Signed Route
		Off-road Trail ²
		Edge Line
N/A		Bike Lane
N/A		Buffered Bike Lane
N/A		Buffered Paved Shoulder
		In-boulevard Pathway
		Potential Crossing ³ Enhancement

Regional Trail Systems

- Bruce Trail
- Other Regional Route⁴

Transportation Features

- Provincial Road
- County Road
- Municipal Road (paved)
- Municipal Road (gravel)
- Connection to Surrounding Municipality
Refer to list below for description of connections

Land Use Features

- Provincial Park
- Crown Land
- County Forest
- Conservation Authority Land
- Municipal Park
- School
- Hospital
- Waterbody
- Municipal Boundary

Key Destinations

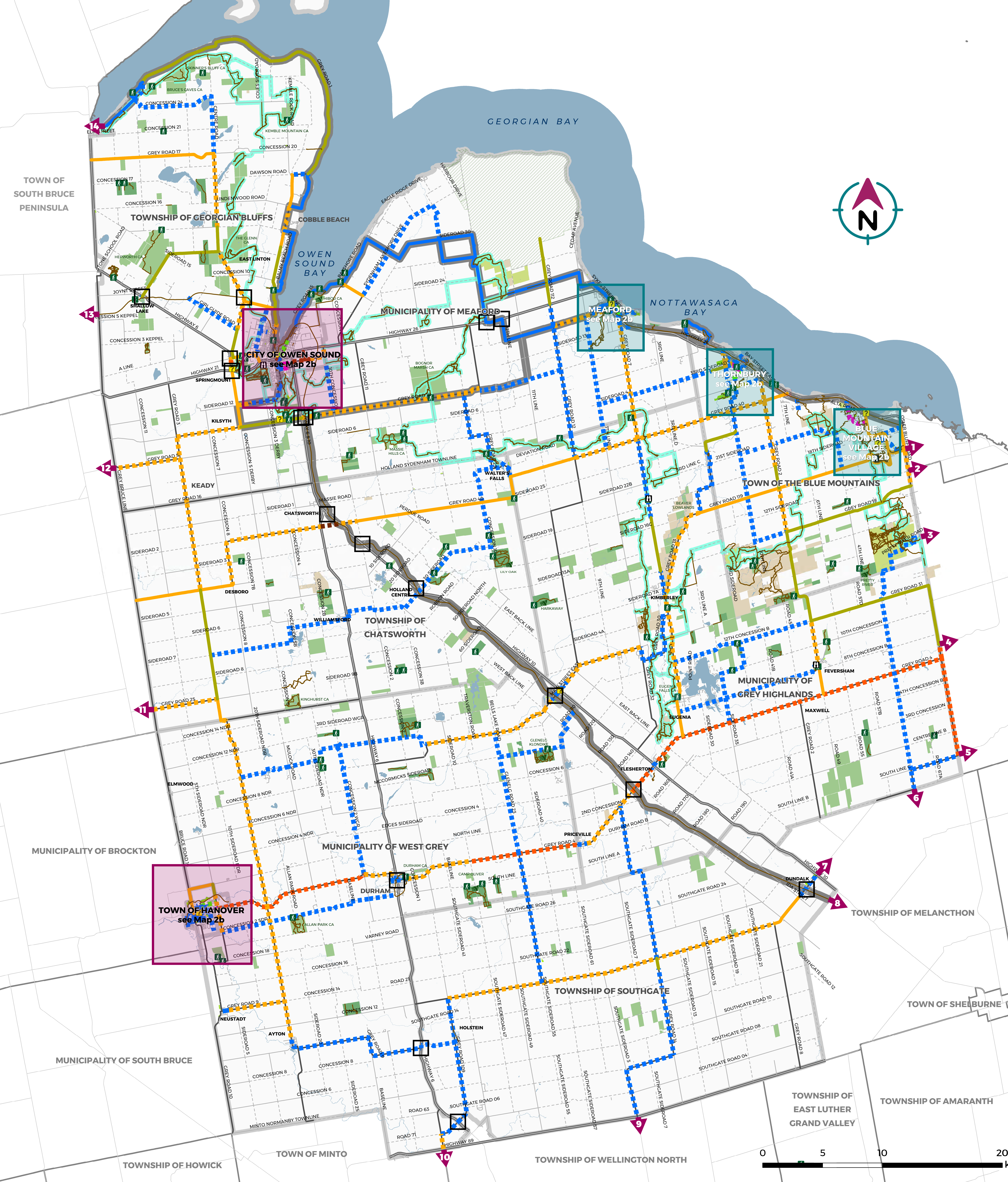
- Beach
- Bike Shop / Rental
- Scenic Lookout
- Waterfall
- Tourist Information
- Trail Access Point (Parking)
- County Forest Access Point

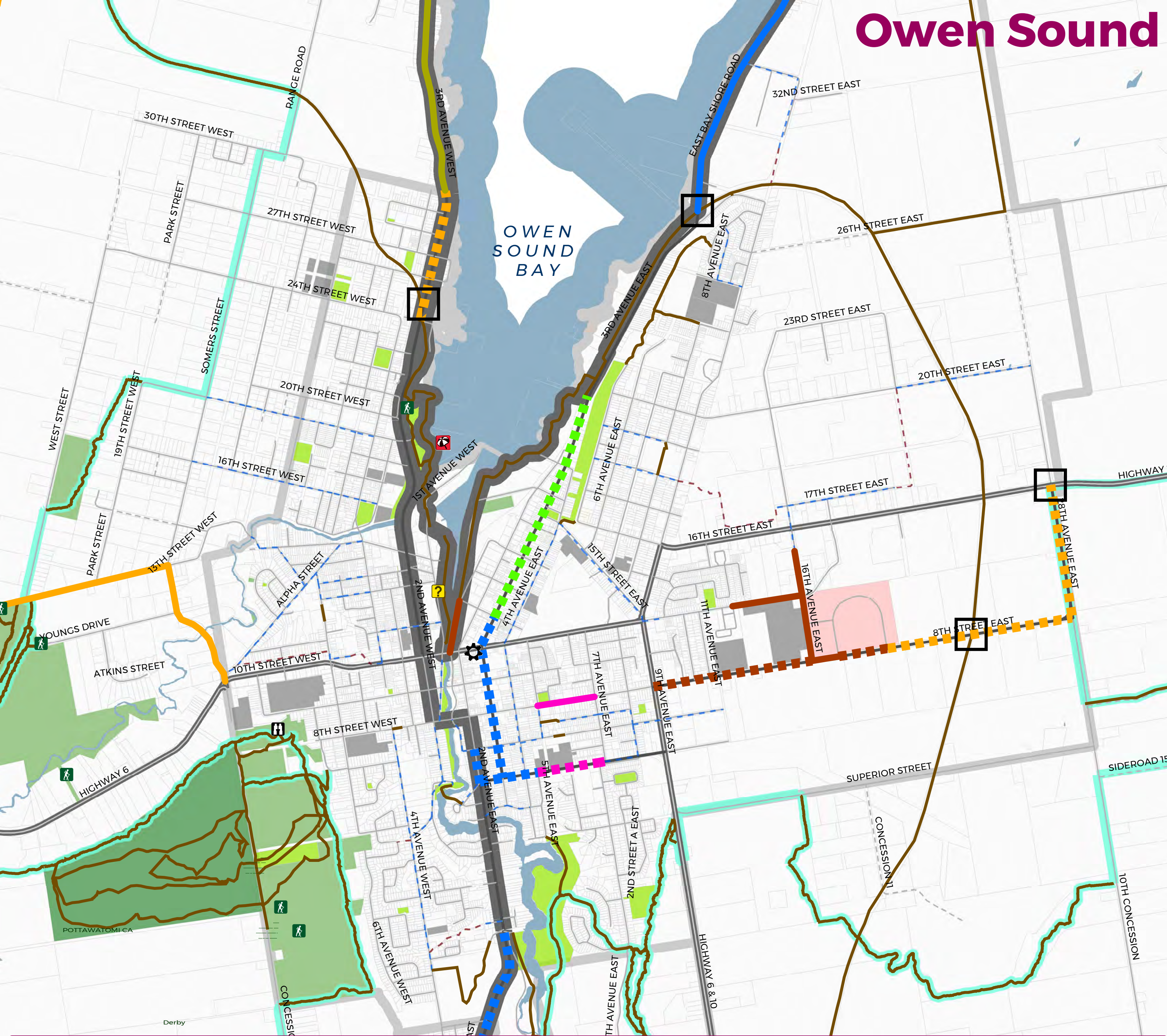
Notes:

- Includes locations where a paved shoulder is proposed along roads with an existing partial paved shoulder (e.g. partial paved shoulder is 1.2 metres or less).
 - Includes routes intended for multi-use purposes including walking, hiking, cycling, cross-country skiing and equestrian use.
 - Potential crossing enhancements have been identified where a route crosses a difficult location (e.g. areas with sightline constraints due to road geometry and roads with high operating speeds and high traffic volume) as well as locations where a proposed route crosses a regional trail system, such as the Grey County CP Rail Trail.
 - Includes the CP Rail Trail, Waterfront Trail, Georgian Bay Cycling Route and the Province-wide Cycling Network.
- Refer to Appendix E for cycling and trail routes located on local roads and lands within the City of Owen Sound as per the City's Official Plan - Schedule D - Active Transportation and Trails Master Plan Model.

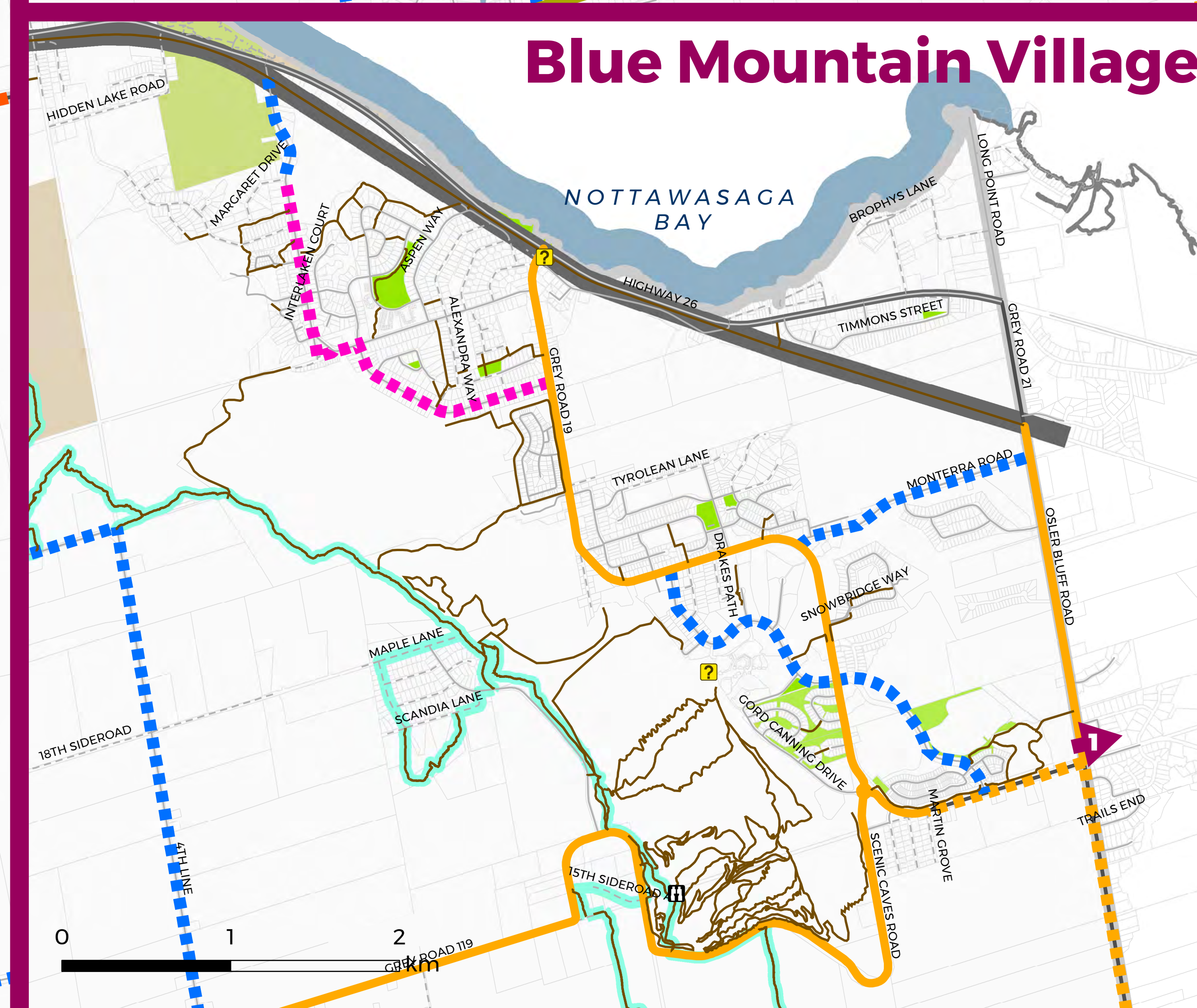
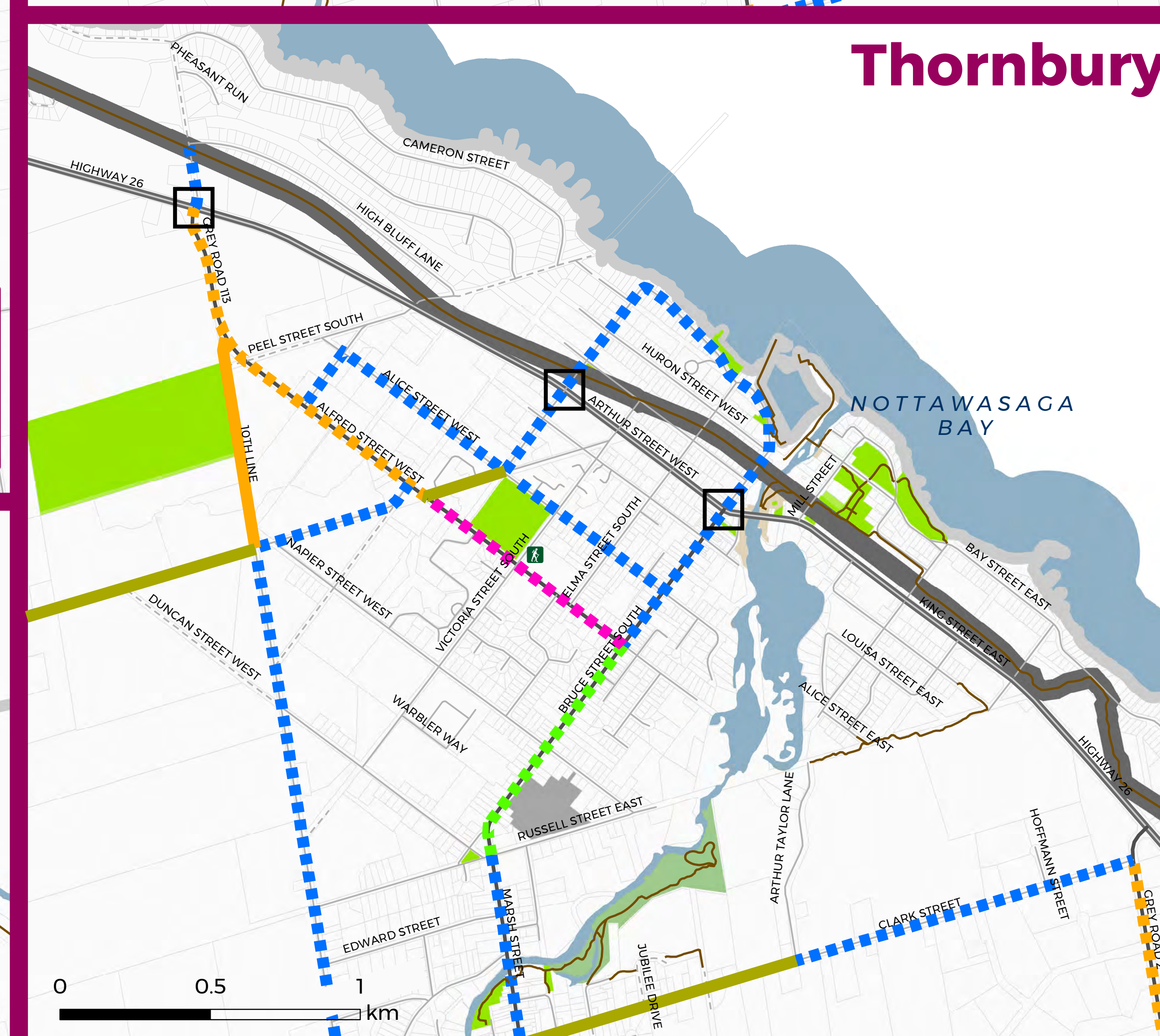
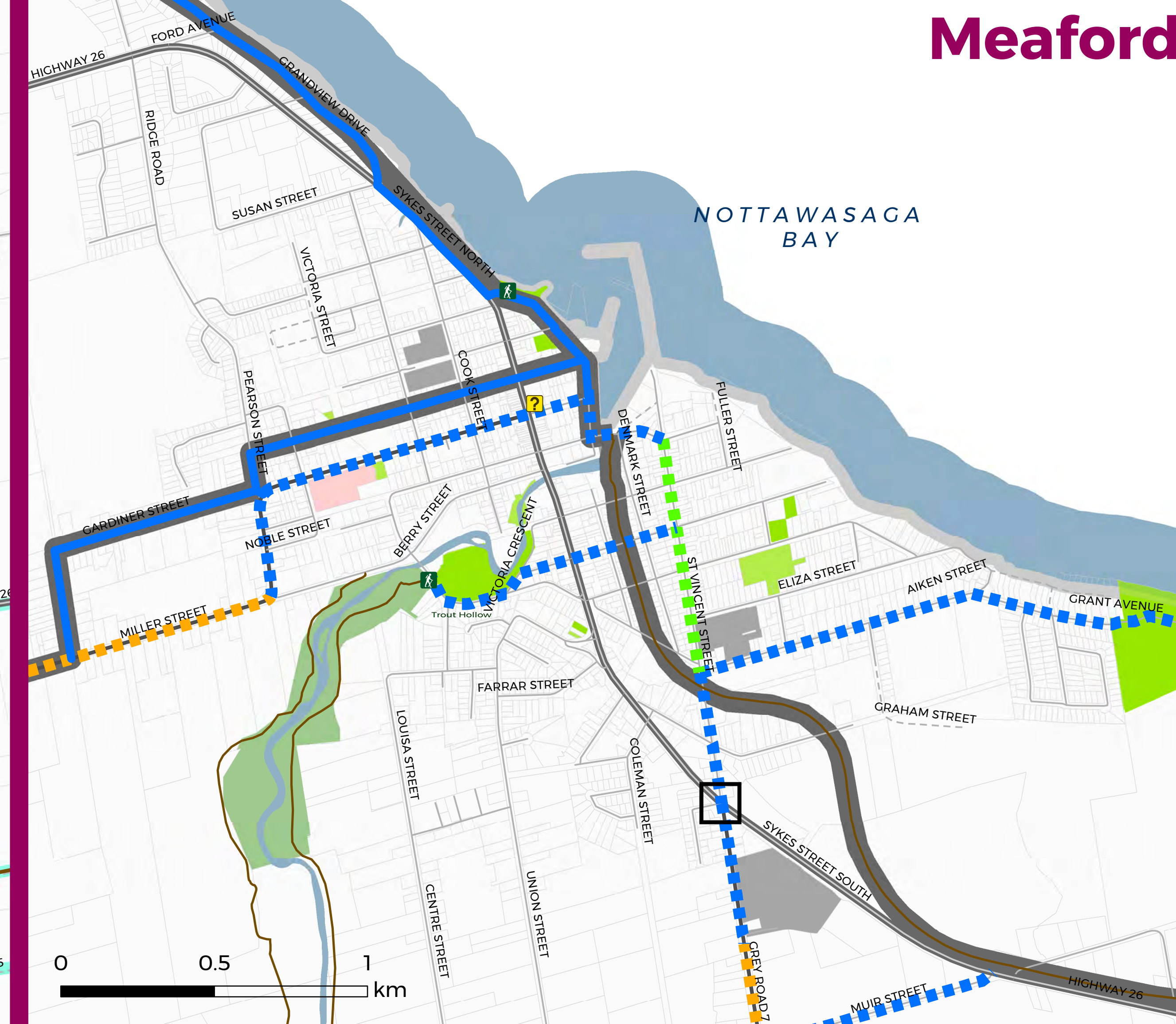
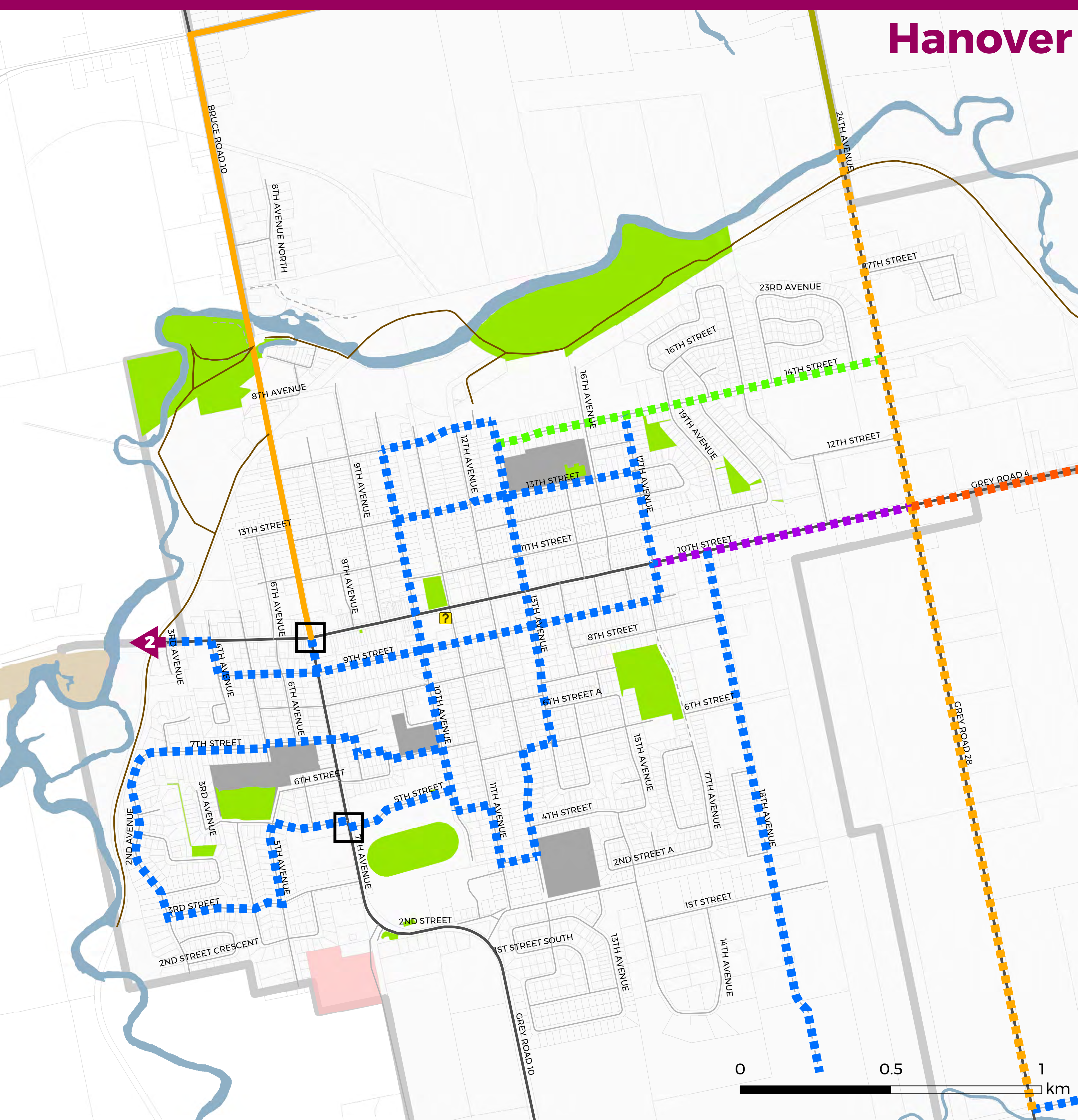
Connections to Surrounding Municipalities

- 1-5** proposed on-road route (Simcoe County TMP 2014)
- 6-7** proposed paved shoulder (Dufferin County AT Master Plan 2010)
- 8** proposed off-road trail (Dufferin County AT Master Plan 2010)
- 9** to Arthur, Wellington County
- 10** to Minto, Wellington County
- 11** to Chesley, Bruce County
- 12** to Tara, Bruce County
- 13** to Park Head, Bruce County
- 14** to Wiarton, Bruce County





Refer to Appendix E for cycling and trail routes located on local roads and lands within the City of Owen Sound as per the City's Official Plan - Schedule D - Active Transportation and Trails Master Plan Model. Only routes proposed on County roads have been identified for the City of Owen Sound.



Map 2b

Built-up

Areas

Preferred Cycling and Trails Network

Grey County Cycling and Trails Master Plan | October 2020

Legend

Draft Network

Existing	Proposed	Description
		Paved Shoulder ¹
		N/A
		Signed Route
		Off-road Trail ²
		Edge Line
N/A		Bike Lane
N/A		Buffered Bike Lane
N/A		Buffered Paved Shoulder
		In-boulevard Pathway
		Potential Crossing ³ Enhancement

Regional Trail Systems

- Bruce Trail
- Other Regional Route⁴

Transportation Features

- Provincial Road
- County Road
- Municipal Road (paved)
- Municipal Road (gravel)
- Connection to Surrounding Municipality
Refer to list below for description of connections

Land Use Features

- Provincial Park
- Crown Land
- County Forest
- Conservation Authority Land
- Municipal Park
- School
- Hospital
- Waterbody
- Municipal Boundary

Key Destinations

- Beach
- Bike Shop / Rental
- Scenic Lookout
- Waterfall
- Tourist Information
- Trail Access Point (Parking)
- County Forest Access Point

Notes:

- Includes locations where a paved shoulder is proposed along roads with an existing partial paved shoulder (e.g. partial paved shoulder is 1.2 metres or less).
- Includes routes intended for multi-use purposes including walking, hiking, cycling, cross-country skiing and equestrian use.
- Potential crossing enhancements have been identified where a route crosses a difficult location (e.g. areas with sightline constraints due to road geometry, and roads with high operating speeds and high traffic volume) as well as locations where a proposed route crosses a regional trail system, such as the Grey County CP Rail Trail.
- Includes the CP Rail Trail, Waterfront Trail, Georgian Bay Cycling Route and the Province-wide Cycling Network.

Refer to Appendix E for cycling and trail routes located on local roads and lands within the City of Owen Sound as per the City's Official Plan - Schedule D - Active Transportation and Trails Master Plan Model.

Connections to Surrounding Municipalities

- proposed on-road route (Simcoe County TMP 2014)
- to Walkerton, Bruce County

Paved shoulder options in Grey County

Existing Partial Paved Shoulder

Option 1

In situations where a proposed route is located on a road with partially paved shoulders that are 1.2 to 1.5 meters wide, the following options are recommended.

Partially Paved Shoulder – No Construction

Where construction is not considered feasible such as undertaking a platform widening, acquiring additional right-of-way or relocating utility facilities to achieve 1.5 metre paved shoulders is cost prohibitive. It is not recommended that additional road construction be undertaken. Consideration should be given to marking these routes with green Bicycle Route Marker signs and where necessary Share the Road signs to indicate a change in the road configuration to motorists.



Option 2

Partially Paved Shoulder – Lane Narrowing

Where a partial paved shoulder exists and there is sufficient edge-to-edge pavement width, it is recommended to narrow and remark the travel lane widths (consistent with the TAC Geometric Design Guide for Canadian Roads) to achieve 1.5 metre paved shoulders. The timing for this implementation should align with future planned capital projects to achieve economies of scale and potential cost savings that are associated with aligning multiple road construction projects.



No Existing Paved Shoulder

Option 3

In situations where a proposed cycling route is located on a roadway with no existing partially or fully paved shoulders the following options are recommended.

Construction is recommended

On roads that form part of the County's cycling and trails network and where no paved shoulder exists, it is recommended that road construction be undertaken to implement a 1.5 metre paved shoulder. However, the timing for implementation should align with future planned road capital projects to achieve economies of scale and potential cost savings that are associated with aligning multiple road construction projects.



Option 4

Construction is recommended (anticipated long-term project)

Where no paved shoulder exists and construction is not considered feasible (e.g. cost prohibitive to widen platform, acquire additional right-of-way, relocate utility poles) it is recommended that the implementation of paved shoulders only be undertaken if a roadway is scheduled for road construction in future capital works schedules. Additionally, at the time of implementation, the proposed facility should be reviewed to confirm the suitability based on the current roadway conditions at that time.



Signed route options in Grey County

A signed route refers to any route on the County's cycling and trails network that is meant to have the green Bicycle Route Marker sign. There are **423.6 kilometres** of proposed signed routes on County's cycling and trails network. These signed routes are located in both rural and urban / built-up areas.

This page is meant to be a "cheat sheet" for what signed routes could look like in Grey County.



Signed route in **urban areas**

Facility Types	Signed routes, signed route with edge lines
Sign Frequency	Every 400 to 800 metres On far side of major intersections and at key decision points
Jurisdiction	Proposed signed routes located in urban areas are located on County and municipal roads

What could this look like?



Example: Town of Oakville

Signed route in **rural areas**

Facility Types	Signed routes, paved shoulders, buffered paved shoulders
Sign Frequency	Every 1 to 2 kilometres On far side of major intersections and at key decision points
Jurisdiction	All proposed paved shoulders and buffered paved shoulders are located on County roads. Proposed signed routes located in rural areas are located on County and municipal roads.

What could this look like?



Example: Town of Penetanguishene

Section 3.1.1 provides additional details on the application of a signed route and each facility type included in the County's cycling and trails network.

CHAPTER 2 RECOMMENDATIONS

Recommendation	Plan Objectives Achieved								
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies
1. The route selection criteria identified in 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 cycling and trails network.									✓
2. The proposed cycling and trails network illustrated on Maps 2a and 2b should be adopted by County Council to guide future design and implementation.	✓	✓	✓	✓	✓	✓	✓		
3. It is recommended that the County continue to work with its partners to identify future opportunities to improve connections to off-road single-track, wilderness trails (e.g. links to / from wilderness trail systems such as Kolapore Wilderness Trails, Bruce Trail, etc. and connections between wilderness trails and community destinations / services.)	✓	✓	✓	✓			✓		
4. Incorporate the cycling and trails network as a Schedule in the County’s Official Plan when next updated.								✓	✓
5. The updated OTM Book 18 three-step facility selection process should be referred to by County staff and its partners as the network is implemented over time to review and confirm facility types before moving into the design and construction stages.									✓

CHAPTER 2 RECOMMENDATIONS (CONT'D)

Recommendation	Plan Objectives Achieved									
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies	
6. The proposed cycling and trails network should be flexible enough to provide for change in routing and/or facility types based on new information, Council policy and data as it becomes available. There may be opportunities for additional or alternate connections to be made in the future. These connections should be considered, and the mapping and database updated if a change is warranted.	✓								✓	
7. It is recommended that the County leverage future opportunities to upgrade existing partial paved shoulders, where possible / feasible, when the respective roads are next scheduled for reconstruction or resurfacing to fully paved shoulders and greater separation from motor vehicle traffic.			✓	✓	✓		✓		✓	

A photograph of a paved path winding through a forest. In the foreground, a person is walking away from the camera. Further down the path, a group of cyclists is riding towards the camera. The path is surrounded by lush green trees and grass.

CHAPTER 3

Network Components

The cycling and trails network is more than the physical alignment of routes. To establish a network that is considered comfortable, safe and well-connected, consideration should be given to various components that impact how the network is planned, designed and constructed.

There is no one-size fits all approach for a cycling and trails network. The development of the County's cycling and trails network reflects sound engineering judgement, best practices and current guidelines. However, it is expected that as the County and its partners move forward through various planning stages, that the future design and implementation of the network and supportive features will reflect context specific characteristics.

The following sections provide an overview of existing design resources and considerations that are recommended to be addressed when planning, designing and implementing the County's cycling and trails network. It is recommended that County staff and partners refer to existing guidelines and standards to ensure that the infrastructure being designed is consistent with widely-accepted documents and resources. The information contained in these sections is not prescriptive. It is intended provide resources and guidance as the cycling and trails network is implemented over time.

3.1 NETWORK DESIGN

There are a number of design guidelines and standards that should be used by County staff and its partners when planning, designing and implementing the cycling and trails transportation network. It is recommended that County staff primarily reference the Ontario Traffic Manual (OTM) series of guidelines books for facility design, markings and signage. In addition to the OTM guidelines, there are resources available at the international, national and provincial level, which can guide infrastructure design. A summary of guidelines and standards that were considered during the process to identify the County's preferred cycling and trails network include:

International Sources:

- American Association of State Highway and Transportation Officials Guide for the Development of Bicycle Facilities

National Sources:

- National Association of City Transportation Officials Urban Bikeways Design Guide and Urban Street Design Guide
- Transportation Association of Canada Geometric Design Guide for Canadian Roads
- Transportation Association of Canada Bikeway Traffic Control Guideline for Canada

Provincial Sources:

- Ontario Traffic Manual Book 18: Cycling Facilities
- Ontario Traffic Manual Book 15: Pedestrian Crossing Treatments
- Ministry of Transportation Ontario Bikeways Design Guidelines.
- Accessibility for Ontarians with Disabilities Act– Built Environment Standards

The design guidelines are recommended to be used as reference by County staff and its partners when moving forward with the planning, design and implementation of future cycling and off-road multi-use trail facilities. Building upon these guidelines, the following sections outline design considerations for the various facility types included in the County's cycling and trails network and additional enhancements that could be considered when implementing the proposed network.

3.1.1 FACILITY DESIGN

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

SIGNED ROUTE

A signed bike route is a shared facility that is formally marked by a green Bicycle Route Marker sign (OTM sign code – M511). 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 along a route.

Supplementary signage and pavement markings can be used such as the Share the Road sign and supplementary tab sign (OTM sign codes – Wc-19 and Wc-19t), Shared Use Lane Single File sign and supplementary tab sign (OTM sign codes – Wc-24 and Wc-24t) and / or painted sharrow symbols. It is important to note that sharrow symbols are not intended to be applied along an entire bike route. The sharrow symbol should be placed in select locations to alert motorists of the expectation to share the lane with cyclists, to guide cyclists on their placement within the shared travel lane, and to serve as an additional wayfinding tool for cyclists.

Signed bike routes should only be implemented on roadways that have low motor vehicle operating speed, traffic volumes and truck volumes. Bicycle Route Marker signs are typically placed once every 2.0 kilometres on a rural roadway, and once every 400 to 800 metres on an urban road in a built-up area. The sign should be also located on the far side of major intersections and other major decision points to assist in wayfinding for cyclists.

Figure 15 shows an example of a signed bike route, a typical cross-section of a bike route and signs that are typically used along a signed bike route.

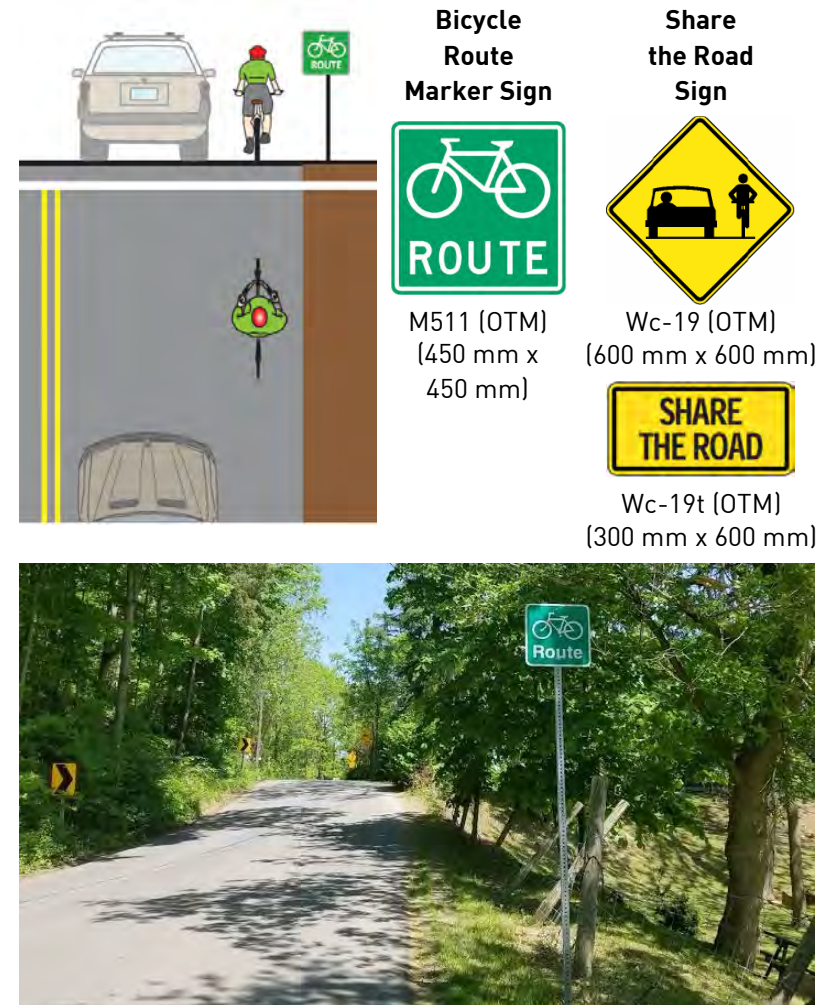


Figure 15 - Signed Route Graphics and Signs

EDGE LINE / URBAN SHOULDER

A signed bike route in urban areas may be supplemented with edge lines to create a space that functions like a paved shoulder for cyclists. Edge lines (also referred to as urban shoulder) provide a space for cyclists separate from the part of a roadway where vehicles travel, without restricting on-street parking.

Cyclists and motorists may interpret an edge line as a bicycle lane even though no bicycle pavement markings are applied to this area. It should be noted that urban shoulders are not an alternative to bicycle lanes but may be used on roadways where there is a strong, site specific justification for not implementing conventional bicycle lanes such as the presence of on-street parking. Edge lines should not be any narrower than 1.2 metres (from face of road curb), which provides the minimum operating width for a cyclist. In recent years, several municipalities across Ontario have used edge lines as an interim measure to build local support for a dedicated cycling facility such as a bicycle lane, without removing on-street parking.

Urban shoulders are delineated using a 100-millimetre-wide white edge line that is placed between the travelled portion of the roadway and the urban shoulder. Similar to a signed bike route, routes with an edge line should be marked by a green Bicycle Route Marker sign (OTM sign code – M511). Edge lines are recommended on roadways that have low motor vehicle operating speed, traffic volumes and truck volumes.

Figure 16 shows an example of a signed bike route with edge line, a typical cross-section, signs and pavements that are typically used along a signed bike route with edge line.

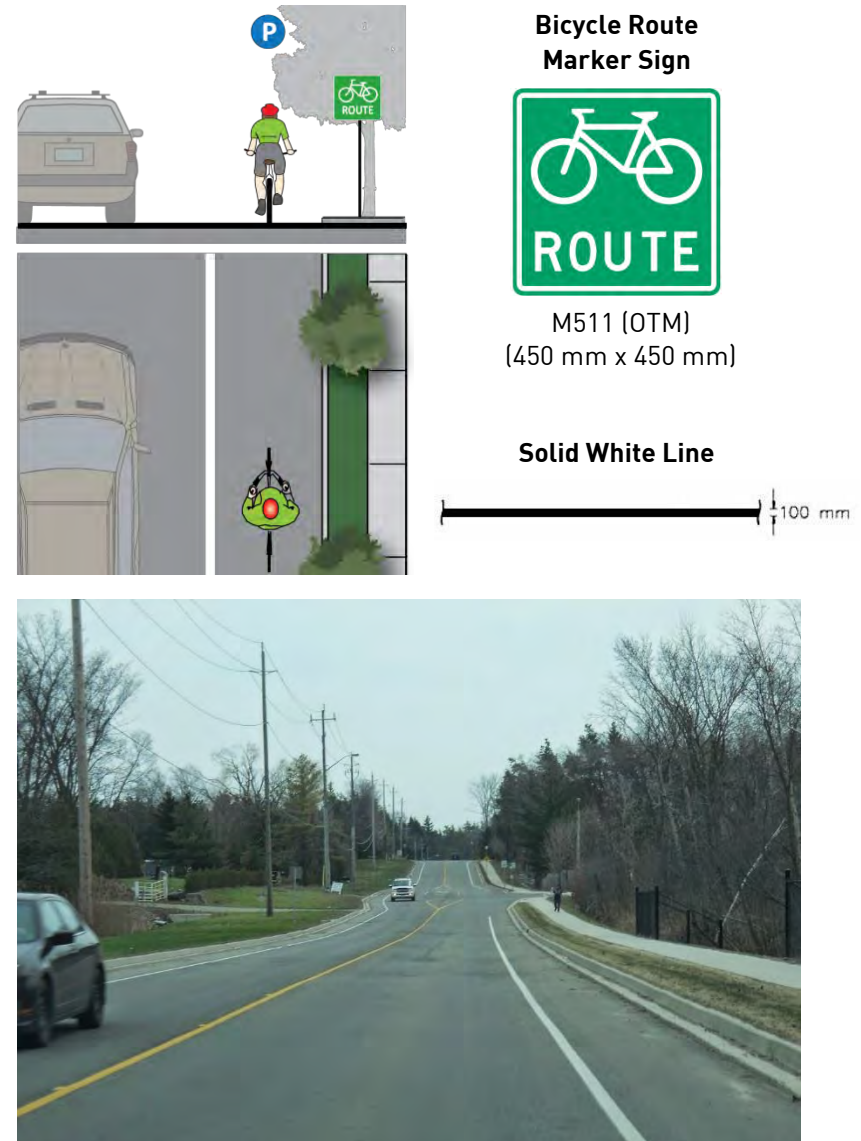


Figure 16 - Edge Line Graphics, Sign and Pavement Marking

PAVED SHOULDER (INCLUDING BUFFERS)

Paved shoulders provide a designated space along the edge of the road for stopped and emergency vehicles, pedestrians, cyclists and other road users. Paved shoulders are typically found on rural roads and used by cyclists and pedestrians as it provides users with an area that is adjacent to but separate from the motor vehicular travel portion of the roadway. 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. As per the Highway Traffic Act, cyclists must travel in the same direction as the motor vehicle traffic immediately adjacent to the paved shoulder and pedestrians must travel facing the direction of travel adjacent to the paved shoulder.

The preferred minimum width of a paved shoulder is 1.5 meters, however, in constrained locations practitioners may consider providing a minimum width of 1.2 metres after applying good engineering judgement and consideration of the context specific conditions. Paved shoulders are typically implemented on roads that have moderate motor vehicle operating speed and traffic volumes. Paved shoulders are not ideal on roads with high volumes of truck traffic. A buffer (minimum width of 0.5 metres) provides greater separation between the shoulder and adjacent motor vehicle traffic. A buffer consists of two white painted edge lines with or without diagonal hatching or with a rumble strip. Buffered paved shoulders are typically implemented on roads that have moderate to high motor vehicle operating speeds and traffic volumes, and where there are more than 30 trucks operating on the route per hour.

Rumble strips can be used 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.

Figure 17 provides examples of a paved shoulder and buffered paved shoulder as well as typical cross-sections.

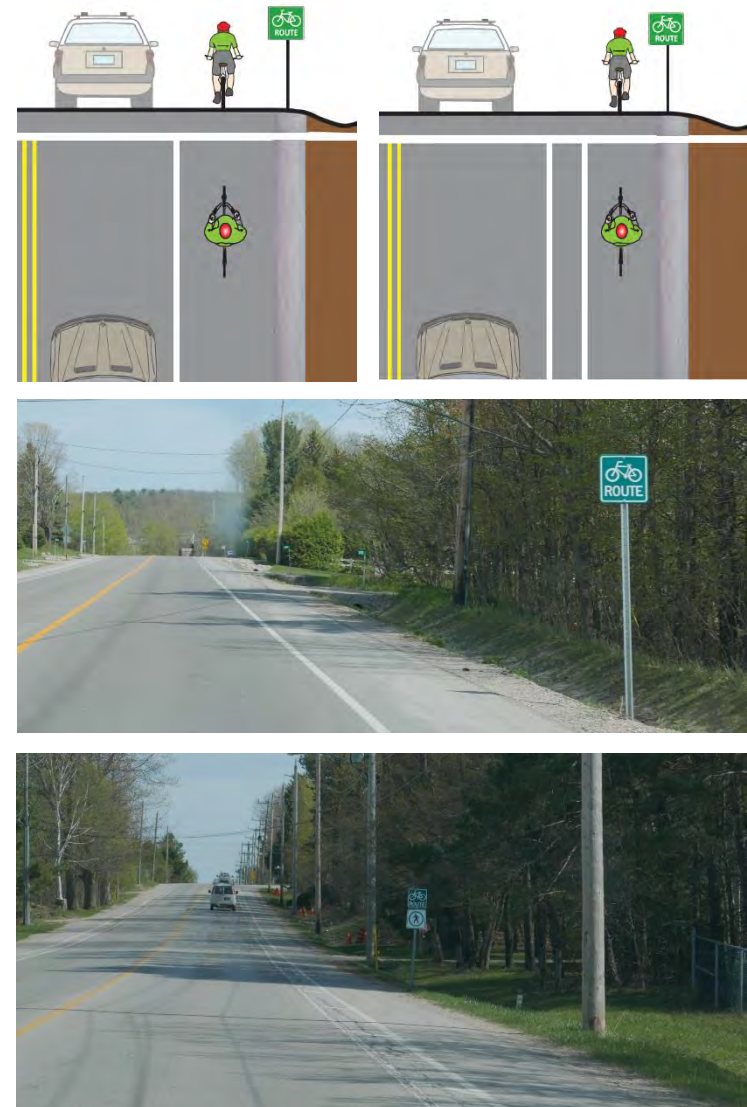


Figure 17 - Paved Shoulder Graphics

BIKE LANE (INCLUDING BUFFERS)

A bike lane is the portion of a roadway that is designated by pavement markings and signage for exclusive use by cyclists. Motor vehicles are typically not permitted to enter the bike lane except if a dashed line is used, for example, at a driveway entrance. In addition, motor vehicles are not permitted to park in bike lanes. Bike lanes are typically implemented on two-lane roads with moderate speeds and volumes of vehicle traffic.

The recommended width for a conventional bike lane is 1.8 metres measured from the face of the curb. The suggested minimum width is 1.5 metres which allows for lateral movement within the lane and for cyclists to avoid debris or pavement defects. As per OTM Book 18, only under constrained segments of roadway (and lengths of 100 metres or less) is it permissible for a narrower bike lane to be used, with an absolute minimum width of 1.2 metres. Where a continuous facility is narrower than 1.5 metres, consideration should be given to classifying the facility as an signed bike route with edge line / urban shoulder.

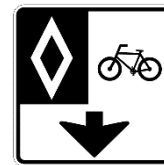
On roadways that have higher volumes, operating speeds and heavy truck traffic, a buffer can be added to provide additional separation between cyclists and motor vehicles. A buffer can range from painted lines to physical separation such as flexible bollards, concrete curbs, planters and raised medians. Based on OTM Book 18 (forth-coming update) the desired width of the painted buffer is 0.9 metres and the minimum width is 0.3 metres. The buffer area can be treated as part of the travelled area for cyclists, allowing passing and navigation around obstacles.

A Reserved Bicycle Lane sign must be used to designate a bike lane. Practitioners can use OTM signs or signs found in the Transportation Association of Canada Bikeway Traffic Control Guidelines for Canada.

Figure 18 shows an example of a signed bike lane, a typical cross-section and signs that are typically used along a bike lane.



Overhead and Ground-mounted Reserved Bicycle Lane Signs



Rb-84 (OTM)
(600 mm x 600 mm)



Rb-84A (OTM)
(600 mm x 600 mm)



Rb-84t (OTM)
(200 mm x 600 mm)



Rb-85t (OTM)
(200 mm x 600 mm)



Figure 18 - Bike Lane Graphics and Signs

IN-BOULEVARD PATHWAY

In-boulevard pathways are physically (horizontally and vertically) 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. The path facilitates two-way travel for pedestrians, cyclists and other active transportation users.

An in-boulevard pathway is typically 3.0 to 4.1 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 to minimize potential impacts to adjacent infrastructure that may be costly to relocate.

To increase the sense of safety and comfort for path users, a wide separation can be provided between the path and the roadway. The minimum recommended space is 1.5 metres measured from the face of the curb or the edge of the travelled portion of the road. This space can also be used for landscaping, snow storage, and the installation of fixed objects such as signs and signal poles.

Signage and pavement markings used for in-boulevard multi-use trails typically includes:

- Shared Pathway sign
- Pathway Organization sign
- Yield to Pedestrians sign
- Dismount and Walk sign
- Pedestrian and Bicycle Crossing Ahead sign
- Optional directional arrow
- Solid or dashed white bicycle lane line

Figure 19 shows an example of an in-boulevard pathway, a typical cross-section and signs that are typically used along the facility

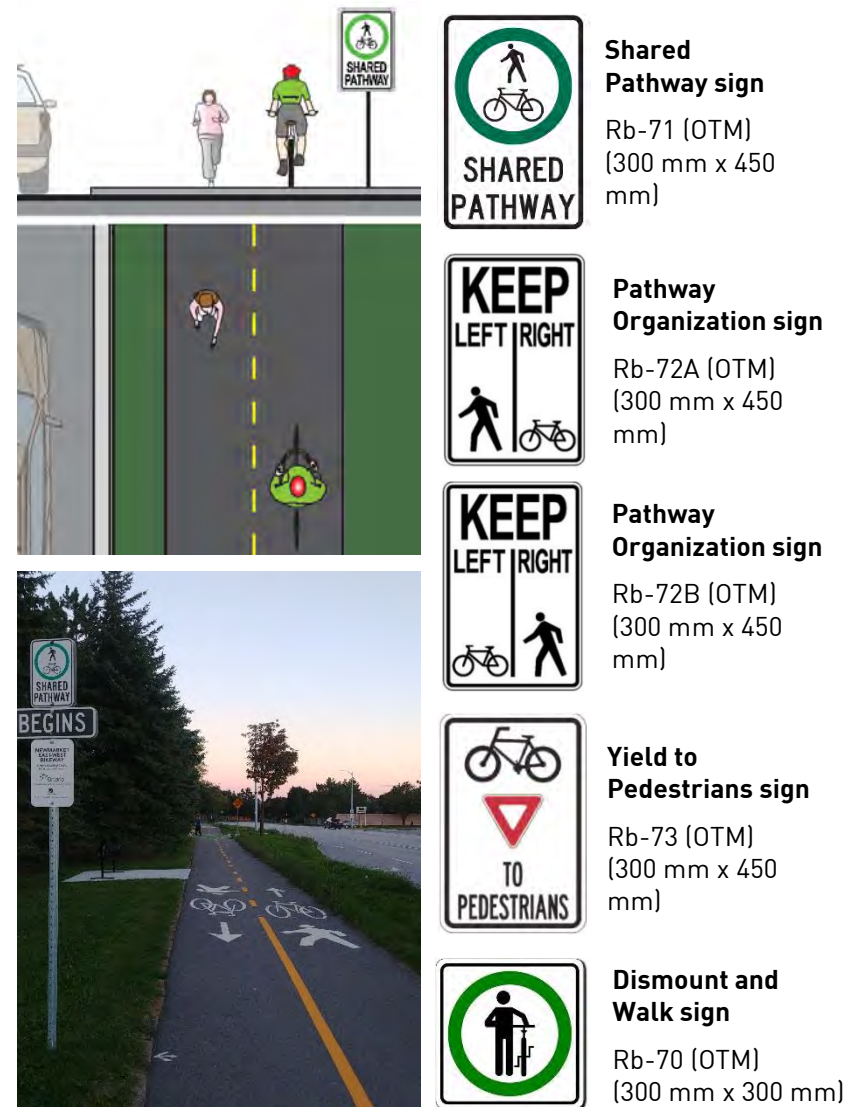


Figure 19 - In-Boulevard Graphics and Signs

OFF-ROAD MULTI-USE TRAIL (WHERE CYCLING IS PERMITTED)

The following information pertains only to off-road multi-use trails where cycling is permitted. Guidance and design consideration for single-track, wilderness trails should be referenced in other documents and sources including the Bruce Trail Conservancy.

Off-road multi-use trails are located outside of a road right-of-way and typically found in a park, open space corridor, along a utility corridor, or in other linear facilities such as within an abandoned railway corridor. Similar to an in-boulevard pathway, an off-road multi-use trail is intended to be used by cyclists, pedestrians and other non-motorized users. Off-road multi-use trails can be supplemented with route signage such as the Shared Pathway sign (OTM sign code, Rb-71) to alert trail users, that the facility is a shared space amongst pedestrians, cyclists and other non-motorized modes.

Off-road multi-use trails could have a variety of surface types depending on the location and context and surrounding land uses. For example, natural surfaces or crushed limestone are typically considered appropriate surface types in rural areas. 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.

The recommended minimum width for an off-road multi-use trail is 3.0 metres and the desired width is 4.0 metres, particularly in locations where there is a high volume of pedestrians, cyclists and other non-motorized users on the trail. Off-Road multi-use trails are intended to accommodate a wide range of user groups and trip purposes.

Though trails typically serve as a recreational function, they can help establish a direct cycling commuter route in corridors that are not directly connected by on-road facilities. **Figure 20** shows examples of off-road multi-use trails and a typical cross-section for the facility.



Figure 20 - Off-Road Multi-Use Trail Graphics

The following table provides a condensed summary of the typical characteristics for facility types identified in this section which are included in the County's cycling and trails network. This information is based on best practices and current design resources including Ontario Traffic Manual Book 18 (forth-coming update).

Table 3 - Overview of Facility Types Included in the County's Cycling and Trails Network

Facility	Traffic volumes (ADT)	Operating speed	Road / Boulevard Impact	Facility Width
Signed route	<2,500	<40 km/h ¹	Low	3.0 – 4.5 metre travel lane
Signed Route with Edge Line	<2,500	<40 km/h ¹	Low	3.0 – 4.5 metre travel lane
Paved shoulder	2,500-5,500	40-80 km/h	Medium	1.2 – 1.5 metres
Buffered paved shoulder	5,500 – 10,000	40-80 km/h	High	1.2 – 1.5 metres + 0.5 – 1.5 metres buffer
Bike lane	4,000 – 7,000 Maximum one motor vehicle lane per direction, otherwise consider a buffered bike lane.	40-60 km/h	Low	1.5 – 1.8 metres
Buffered bike lane	4,000 – 7,000	40-60 km/h	Medium	1.5 – 1.8 metres + 0.5 – 1.2 metres buffer
In-boulevard pathway	7,000 or more	>50kph	Very High	3.0 – 4.0 metres + 1.5 metres offset from back of road curb
Off-road multi-use trail (trail permits cycling)	N/A	N/A	N/A	3.0 – 4.0 metres + minimum horizontal clear zone of 1.5 metres

Note:

1. In locations where traffic volumes are very low (e.g. less than 1,000 cars per day) the threshold for speed could be higher. Practitioners are encouraged to reference the OTM Book 18 facility selection process to help identify the desirable level of separation for a facility based on traffic volumes and posted speed. The facility selection process includes three steps and it is important that practitioners complete each step to ensure that the best possible facility type has been identified for the specific context and roadway characteristics.

3.1.2 TRAVEL LANE WIDTHS

The design of a road can have a direct impact on the perceived level of comfort and safety for pedestrians and cyclists. The Transportation Association of Canada Geometric Design Guide for Canadian Roads identifies a number of considerations and elements which impact the design of a roadway cross-section, including:

- Safety;
- Design speed;
- Climatic conditions such as snow accumulation;
- Land availability;
- Traffic volumes (current and project volumes);
- Potential need for special purpose lanes such as turning lanes, on-street parking, or bus lanes;
- Existing major utilities;
- Adjacent land use and access patterns; and
- Intended function / use.

The width of motor vehicle travel lanes can vary depending on the location of the road, who the anticipated road users are and the intended function of the road. The ability to re-design and re-purpose the existing curb-to-curb width of a roadway can provide opportunities to implement on-road cycling facilities, such as bike lanes and buffered bike lanes, where possible and in conjunction with scheduled capital works projects. Many municipalities in Ontario have taken similar approaches to implement on-road cycling facilities where feasible and appropriate – this approach is commonly referred to as a “road diet”.

A road diet includes a redistribution of roadway space whereby the number of travel lanes are reduced or travel lane widths are narrowed and reallocated to other modes, such as cycling. Road diets are typically implemented along sections of road where data indicates that a reduction or narrowing vehicle lanes is not expected to have a significant impact on the overall capacity and / or demand of motor vehicle traffic flow and level of service.

The following tables outline the recommended and practical design parameters for through-lane widths along rural and urban roadways based on the Transportation Association of Canada Geometric Design Guide for Canadian Roads:

- **Table 4** presents lane widths for lower volume, two-lane rural roadways.
- **Table 5** presents lane widths for high volume, multi-lane rural roadways.
- **Table 6** presents lane widths for urban roadways.

Figure 21 provides an example of where a road diet (narrowing existing travel lanes) can be considered in the future, if possible and where feasible, in Grey County to achieve implementation of paved shoulders.

Table 4 - Through Lane Widths for **Rural Roadways** (Design Hour Directional **Volume <450**)

Design Speed (km/h)	Design Domain			
	Practical Lower Limit	Recommended Range		Practical Upper Limit
		Recommended Lower Limit	Recommended Upper Limit	
60 and less	2.7m	3.0m	3.7m	4.0m
70 to 100	3.3m	3.5m	3.7m	4.0m
110 and higher	3.5m	3.5m	3.7m	4.0m

Table 5 - Through Lane Widths for **Rural Roadways** (Design Hour Directional **Volume >450**)

Design Speed (km/h)	Design Domain			
	Practical Lower Limit	Recommended Range		Practical Upper Limit
		Recommended Lower Limit	Recommended Upper Limit	
60 and less	3.0m	3.5m	3.7m	4.0m
70 to 100	3.5m	3.5m	3.7m	4.0m
110 and higher	3.5m	3.7m	3.7m	4.0m

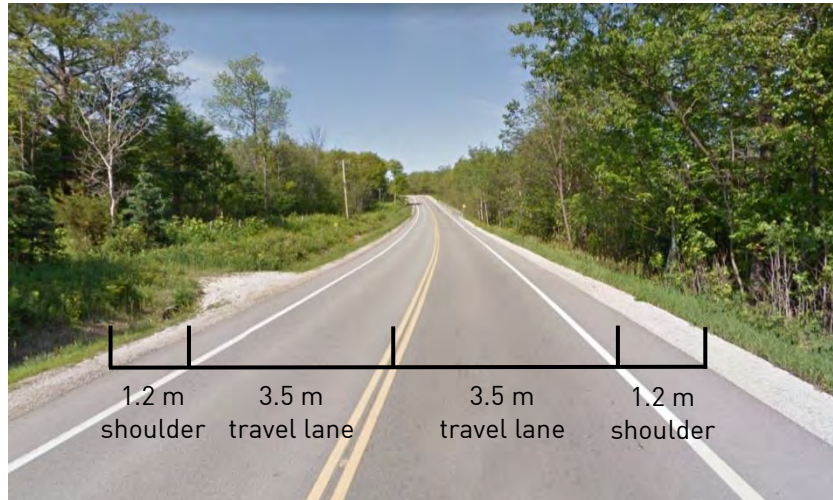
Table 6 - Through Lane Widths for **Urban Roadways**

Design Speed (km/h)	Design Domain			
	Practical Lower Limit	Recommended Range		Practical Upper Limit
		Recommended Lower Limit	Recommended Upper Limit	
60 and less	2.7m	3.0m	3.7m	4.0m
70 to 100	3.0m	3.3m	3.7m	4.0m
110 and higher	3.5m	3.7m	3.7m	4.0m

Where buses and larger trucks are expected to regularly use a lane, a minimum lane width of 3.3 metres is recommended on rural and urban roads regardless of the design speed or traffic volumes.

Grey Road 19 (2nd Line to Blue Mountains / Clearview Townline)

Current Conditions



Proposed Conditions



Grey Road 17 (Grey Road 170 to Concession Road 14)

Current Conditions



Proposed Conditions

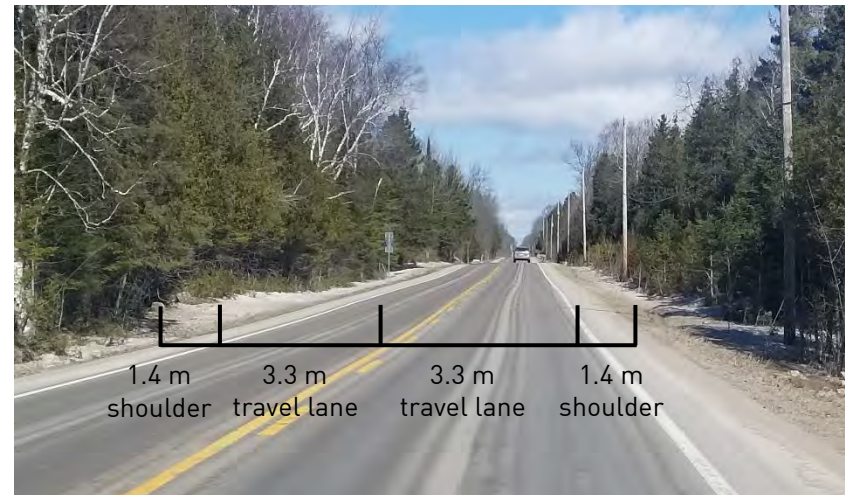


Figure 21 - Examples of Narrowing Travel Lane Widths

3.1.3 TRAIL CROSSINGS

Extensive cycling and trail networks that feature long linear trail systems, such as the Great Lakes Waterfront Trail (including the Tom Thomson and Georgian trails), the Grey County CP Rail Trail and the Bruce Trail, cross roads, highways, natural features such as waterways and other physical barriers. In these cases, design features are needed to guide users across the barriers. By implementing crossings and structures that reflect the design of the trail and the conditions that are being crossed, a greater sense of connectivity can be achieved. The following information outlines design considerations for trail crossings which are intended to be referenced with the County's Recreational Trails Master Plan for a fulsome overview of trail design guidelines in Grey County.

3.1.3.1 Trail Crossings Requiring a Structure

Where possible, the trail network is meant to make use of existing bridges, including pedestrian bridges, vehicular bridges and abandoned railway bridges in appropriate locations. In cases where this is not possible, consideration could be given for a new structure to allow people to cross a physical barrier.

The following are some general considerations when implementing trail structures:

- Bridge designs require approval from the conservation authorities and other stakeholders (could include the Niagara Escarpment Commission, local municipalities and private landowners).
- All bridges should be designed to withstand flooding, and to prevent them from becoming a barrier to flood flows.
- Bridge maintenance should include removal of accumulated debris as required.
- Railings should be considered if the height of the bridge deck exceeds 60cm above the surrounding grade.
- With accessibility in mind, an appropriate trail surface should be installed on the trail, and decking should be laid perpendicular to the path of travel, with openings less than 20 millimetres to meet AODA requirements.
- In most situations for major trails, a prefabricated steel truss bridge anchored on concrete abutments or helical piers is a practical, cost effective solution.
- Bridges would not typically be installed on mountain biking trails and minor trails with dirt surfaces.



3.1.3.2 Trail Crossings Requiring Design Elements for At-grade Crossings of Roadways

Where off-road trails cross roadways and high-volume County / Provincial roadways, there should be a clearly marked point where the movement of pedestrians, cyclists and vehicles will be managed. Trail crossings or terminus points can be designed to clearly articulate the way in which users are meant to cross the roadway or how they should transition to the next portion of the trail.

Having trails cross roads at intersections is preferred where feasible, and mid-block crossings are generally undesirable. However, in some locations mid-block crossings are inevitable due to overall configuration of the trail network and functionality for trail users. The following are some of the elements which could be considered when a trail approaches or crosses a major or minor roadway.

- Creating and maintaining an open sight triangle at the crossing point to allow trail users to see approaching vehicles and for trail users to be seen by drivers in approaching vehicles.
- Access barriers on the trail which serve to prevent unauthorized users from entering the trail, and act as a visual cue to trail users that they are approaching an intersection with the road.
- Caution signs along the roadway in advance of the crossing point to alert motorists to the upcoming crossing.
- Caution signs along the trail to alert users of the upcoming roadway crossing.
- Aligning the crossing point to achieve as close to possible a perpendicular crossing of the roadway to minimize the time that users are in the traveled portion of the roadway.
- A concrete ramp with tactile warning plates in the boulevard and curb ramps on both sides of the road to allow users to enter and cross the road efficiently.
- Pavement markings where appropriate to delineate a crossing should only be considered at crossings where there is some form of vehicle control in place (e.g. stop sign, or traffic signal or pedestrian crossover) and not used at uncontrolled trail intersections with roads. Pavement markings at uncontrolled crossings may give users the false sense that they have the right-of-way over motor vehicles, which is contrary to the Highway Traffic Act.



3.1.4 SIGNAGE AND WAYFINDING

A wayfinding strategy comprises of a system of signs, pavement markings and other tools to help people on foot and on bikes navigate to destinations along a network regardless of their existing familiarity with a place. This is accomplished through clear and consistent wayfinding guidance. Successful wayfinding is an important investment that supports the growing cycling tourism market in Grey County by creating an intuitive and welcoming place to explore by bike.

A clear and consistent wayfinding approach can also encourage more casual riders (such as recreational cyclists and trail users) to ride their bike more often, by familiarizing them with the cycling and trails network, identifying the best routes to destinations, and helping overcome over-estimation of travel time by cycling. Wayfinding can also be used by those on foot to better understand possible route options and how to get around in their community.

The following sections provide an overview of the different components of wayfinding and signage including key principles, existing wayfinding in Grey County, opportunities, destination hierarchy and types of signage. The design and implementation of signage and wayfinding is intended to complement the existing and proposed facilities that make up the County's cycling and trails network. **Figure 22** illustrates different examples of cycling and trail wayfinding for reference.

Additional details on signage types and standards are contained in **Appendix C** for reference.



regulatory signage



road directional signage



trailhead signage



trail etiquette signage



trail directional signage



interpretive signage



trail gateway signage



trail marker signage

Figure 22 - Wayfinding and Signage Examples

3.1.4.1 Principles

The design of a wayfinding strategy should follow principles of:



Connecting Places: Wayfinding should help people bike between destinations and develop an increased sense of how biking can provide mobility options for people of all ages and abilities. It builds on existing cycling and trail networks and gives directions on complete and continuous routes rather than scattered interventions.



Maintaining Movement: It is important to place signs in advance of major decision points and repeat as necessary to ensure that signs are quickly understood so that cyclists maintain motion. Repeated stopping and starting to interpret signs or check maps is tiring and frustrating. Wayfinding information that cannot be read quickly by cyclists at desired travel speeds makes journeys less attractive.



Keeping Information Simple: Providing the right amount of information in a progressive way that is enough to allow users to make decisions without overloading them will help improve wayfinding and navigation of the network by a variety of users. The longer someone needs to understand something, the less likely it will be used.



Being Consistent: It is important to ensure that sign design, materials, symbology, and placement is consistent, predictable and recognizable throughout the network. A consistent set of references also helps users trust and learn the system.



Staying Relevant: Provide connections to places that locals and visitors want to go to or help orient them within the network.

3.1.4.2 Existing Wayfinding in Grey County

Grey County has already started implementing wayfinding signage on a number of roads and off-road trails. **Figure 23** shows some existing signage and wayfinding that can be found throughout the County. It is recommended that any future wayfinding strategy should complement what has already been implemented.

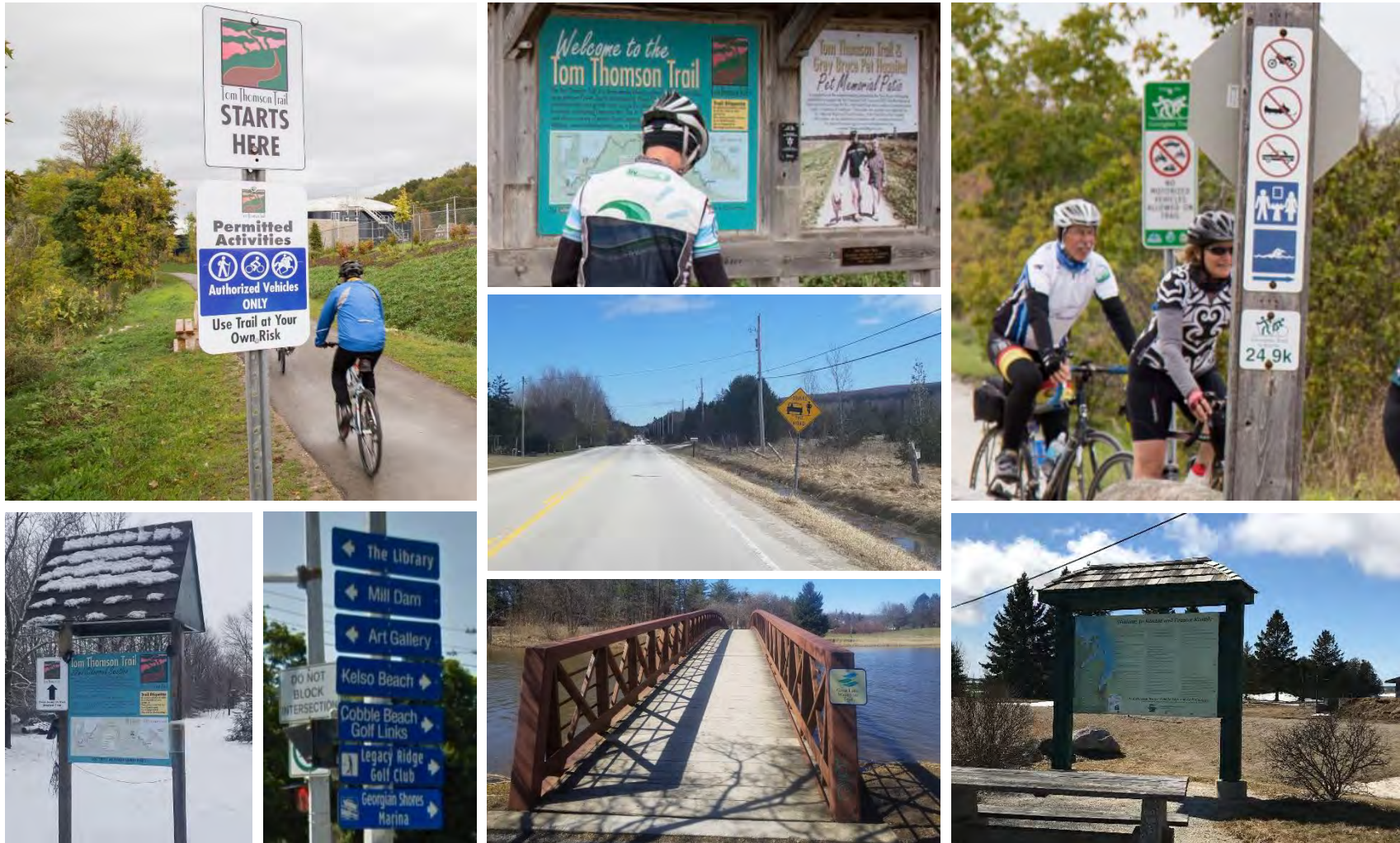


Figure 23 - Examples of Existing Signage and Wayfinding in Grey County

3.1.4.3 Opportunities

A wayfinding strategy should build upon the current wayfinding and branding in Grey County and develop concepts that include distance and direction to key destinations that can be accessed from the County's cycling and trails network. An inventory of existing and planned cycling and trails wayfinding assets should be completed. Opportunities to enhance these investments include:

- **Unsigned Assets:** Existing cycling infrastructure and destinations that have been established without the provision of wayfinding. The addition of wayfinding signage would provide immediate benefit, particularly for destinations such as transit hubs and popular public spaces.
- **Lack of Information:** In many crucial locations, such as at key decision points or on local streets that may be suggested connections, more information is needed to make navigating the network easier.
- **Cohesive Network Awareness:** Create a system that is easy to recognize, especially for people new to cycling or those unfamiliar with an area. It would also allow users to discover easy routes that can be taken by bike in place of busy routes taken by personal vehicles.
- **Promoting Destinations:** Information on wayfinding signs helps to build awareness about public assets such as parks, community centres, public libraries, civic buildings, landmarks and attractions.

There is good reason for cyclists to visit Grey County, from the scenic views of Georgian Bay and the Georgian Highlands to the racing and training routes of the Blue Mountains Gran Fondo. Visitors will find wineries, breweries, various recreational resorts including Blue Mountain, restaurants, historic mills and waterfront beaches. Wayfinding will improve their experience and help enhance Grey County as a cycling tourism destination.



Ontario by Bike features a number of on-road routes, loop routes and off-road trail systems that could benefit from a consistent wayfinding and signage approach. Many of the routes reflect the County's cycling loops (refer to **Figure 9**) and include:

Balaclava Cycling Route [here](#)

This route is primarily an on-road route through the east and west shores of Owen Sound. This route enters the County through Kelso Beach Park and connects through the Tom Thomson Trail to East Bayshore Road. The route continues north on Bayshore Road to the settlement of Balaclava and ends at the Tom Thompson Trail that circles back to Owen Sound. The Balaclava Cycling Route is approximately 50 kilometres in length.



Lake Eugenia Loop [here](#)

This loop route is 90 kilometres in length (or 111 kilometre with alternate routing) and is considered most suitable for experienced cyclists looking to ride for fitness purposes. The route has a number of climbs that connects riders through the outskirts of Collingwood and Thornbury, as well as Rob Roy, Feversham, Eugenia and Kimberley.



Neustadt Country Road Loop [here](#)

This loop route is 27 kilometres in length and considered an easy / leisurely ride. The route begins and ends in Neustadt starts and traverses through scenic rural landscape through the County. Cyclists along the route are connected to Sulphur Springs Conservation Area for a picnic under the trees, the historic Neustadt Springs Brewery and other cultural sites. The route does contain some paved and gravel roads.



3.1.4.4 Destination Hierarchy

A wayfinding system can be designed for a variety of contexts, from a small municipality, to a big city through careful consideration of a variety of components including destination hierarchies, sign types, design of signage and use of pavement markings. A destination hierarchy is a strategy for consistently and predictably choosing which routes and destinations to sign, and at what distance to sign them. It is useful when there are too many possible destinations to include on a sign. A ranking system is used to categorize routes and destinations, typically based on their level of importance within a certain range of distance.

The following is a list of questions for practitioners and decision makers to consider when signing routes and destinations within a cycling and trails wayfinding system:

- Is the cycling route significant or leading to a significant destination?
- Is the destination accessible by a continuous cycling route?
- Is the location or route open year-round and accessible to the public?
- Is the destination or route relevant to a user at this particular point in the network?
- Is the destination or route within a distance that is reasonable to travel?

Destination wayfinding signs may be installed on “regionally significant” routes to guide cyclists to the following destinations:

- Major tourist attractions of Regional Significance as defined by regional tourism
- Public trails including the Bruce Trail
- Municipalities
- Downtown areas, rural hamlets and BIAs
- Major public transit hubs / stations
- Public washroom facilities
- Schools and post-secondary institutions
- Connecting bike routes
- Public community / recreational centres
- Bridges

A preliminary step in the development of wayfinding signs for Grey County’s cycling and trail network will be to identify and list assets that should be signed in each implementation area or along specific corridors. There will often be many destinations suggested as candidates to sign and it will be difficult or impossible to sign them all. **Appendix C** contains details on a proposed destination hierarchy for Grey County which can be used to determine the distance at which certain destinations are signed.

3.1.4.5 Demonstration Project

A pilot implementation is important to test the functionality of the wayfinding system and get feedback from users. Based on a preliminary review of regionally significant routes, **the segment of the Waterfront Trail from Owen Sound to Meaford (the Tom Thomson Trail)**, shown in **Figure 24**, is recommended as a demonstration wayfinding project.

- **Start:** Bayshore Community Centre, Owen Sound, Ontario
- **End:** Beginning of Georgian Trail, Meaford, Ontario
- **Distance:** 30.9 km (approximately)

3.1.4.6 Next Steps

The following steps are recommended to implement a cycling wayfinding demonstration project:

1. Confirm wayfinding approach and finalize sign design;
2. Identify and list destinations that should be signed within the pilot area;
3. Conduct an initial review of required decision, turning and confirmation signs;
4. Conduct a signage audit to inventory existing signs and opportunities to install signs on existing posts;
5. Prepare signing plan including cost estimate;
6. Coordinate with appropriate jurisdictions and confirm budget and approval for installation;
7. Manufacture signs;
8. Contact Operations to coordinate stakeouts for posts installation (as needed), hardware and other requirements; and
9. Collect feedback through online and intercept surveys.

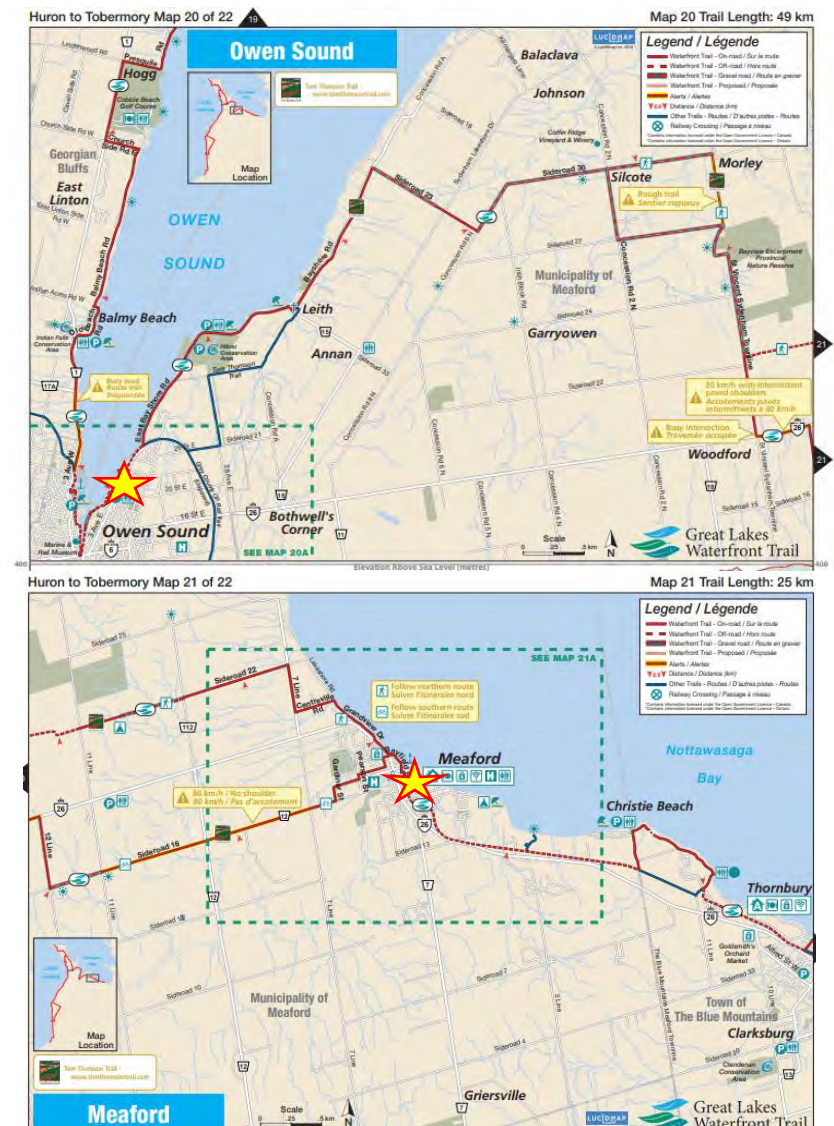


Figure 24 - Proposed Wayfinding Demonstration Project
Graphics Source: Waterfront Trail

3.2 USER TYPES

As part of the network development and facility selection process, the characteristics of potential user groups was considered. The Grey County Cycling and Trails Master Plan focusses on pedestrians, cyclists and mobility-assisted users as the primary user groups in addition to and other non-motorized forms of travel and recreation, however additional user groups were identified. The following sections provides an overview of the pedestrian and cyclist sub-user groups, as well as other user groups including all-terrain vehicles, snowmobile, equestrians and e-scooters.

Primary user types



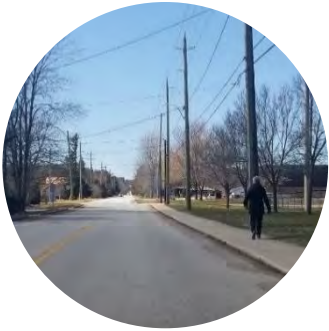
Cyclists

Much like pedestrians, people bike for a variety of interests and purposes including recreation, long-distance / touring and commuting reasons. The typical length of a bike trip can vary depending on the trip purpose such as day-to-day activities by bike, short distance trips or long-distance and multi-day excursions. The average speed for a cyclist on a trail is 15-20 km/h and 18-30 km/h on a road. In some cases, cyclists may reach speeds in excess of 30 km/h when traveling downhill on roads or hard surfaced trails. Some bicycles are designed to travel easily over stone dust and gravel surfaces (all-terrain, hybrid or mountain bikes), whereas, narrow-tired touring and racing bike require very compacted granular surfaces or hard surface pavements such as asphalt.



Mobility-assisted users

Similar to pedestrians, users with mobility aids such as wheelchairs, powerchairs, walkers and probing canes have a wide range of interests and motives including leisure, relaxation, socializing, exploring, making contact with nature, meditation and fitness. Mobility-assisted users tend to use sidewalks, pathways and off-road trails where they are convenient, well designed and properly maintained. Sections 80.8 and 80.10 of Design of Public Spaces Standards (Accessibility Standards for the Built Environment, O. Reg. 191/11) provide technical requirements for the design and construction of new trails.



Casual Walkers

Everyone walks at some point in the day whether it's from their house to the car, the car to their place of work or their place of work to lunch. Since walking is a basic human activity, it is typically considered at the initial stages of transportation and land use planning. Within the County's urban areas, people typically walk along sidewalks, in plazas, trails and any other footpaths that are convenient, well maintained and directly connected to their destination. Within the County's rural areas, people typically walk along a paved shoulder or hike on off-road trails where available. People that walk tend to engage in community-based trips focusing on shopping, running errands and walking to work and / or school. Casual walkers and hikers use a variety of surface types including natural surfaces such as woodchip, granular surfaces or hard surfaces such as asphalt and concrete. Many people that walk in Grey County everyday also use sections of wilderness trails such as the Bruce Trail.



Joggers / Runners

The primary motivation for joggers and runners is fitness and health. Joggers and runners are typically accomplishment-oriented, enjoy travelling on trails at higher speeds for distances between 3 and 15 kilometres and often avoid hard surfaces such as asphalt and concrete. Many joggers and runners prefer granular, natural (earth) and turf surfaces which can provide a more cushioning effect.

Additional user groups

Though the intent of the Cycling and Trails Master Plan focusses on on-road cycling opportunities and off-road multi-use trails where cycling is permitted, it is acknowledged that the following users could benefit from future infrastructure improvements.



Wilderness Hikers

There are many types of wilderness trails that are available for different types of hikers. For instance, there are short loop trails of varying difficulty for those looking for a 1 to 2 hour hike (or less). There are also longer hikes of varying difficulty for hikers looking for that type of wilderness experience. For example, the Bruce Trails Conservancy clubs, on occasion, offer hikes longer than 30 kilometres in a single day.

Wilderness hikers are most often found on off-road trails and prefer a natural surface such as rocks and dirt such as the Bruce Trail. This user group is typically inclined to map reading, more self-sufficient than casual walkers and hikers, and more attracted to challenging terrain and rural areas.



All-terrain vehicles (ATV) and Snowmobiles

Though the Cycling and Trails Master Plan does not directly address their requirements for ATVs and snowmobiles, it is recognized that there are existing trails and usage of ATVs and snowmobiles in the County. For the purposes of the master plan it has been assumed that in some cases multi-use trail facilities may be shared between pedestrians, cyclists and ATVs / snowmobiles, such as the Grey County CP Rail Trail. As a result, there are a few general guidelines that should be given consideration when planning and designing multi-use trails to ensure that all trail users are able to enjoy them in a safe and comfortable manner:

- Signage should be installed, warning users of potential ATV and snowmobile traffic and vice-versa;
- Where ATVs and snowmobiles are permitted, trails should be wide enough to allow ATVs and snowmobiles to safely pass other trail users; and
- Trails should be patrolled to ensure that trail users are acting in a safe and respectful manner.

Equestrians

Horseback riding typically takes place on permitted trails in quiet rural settings. Within Grey County, horseback riding is permitted on a number of County-owned forest tracts, some conservation areas in addition to the Tom Thomson Trail and other farms / centres that offer guided rides. Safety is a primary consideration when horses must mix with trail users including pedestrians, mobility assisted users, cyclists and motorized vehicles. The following guidelines should be considered when planning and designing trails to support equestrian users:

- Trail width should accommodate a shy distance of 0.6 metres, to allow for uneasy horses to shy to one side of the trail, and pull-off areas should be regularly located to allow for passing of other trail users;
- Visual barriers such as vegetation or solid fences are also recommended where trails are adjacent to roadways or areas of high activity as sudden motions in peripheral view zones may alarm a horse; and
- Where bollards are used, mounted riders generally cannot pass through bollards spaced less than 1.5 metres apart, unless they are less than 0.9 metres high and below foot / stirrup level.

In addition to these considerations, local equestrian groups / riders should be consulted when trails are being designed for equestrian use.






Electric bicycles and scooters

Micro-mobility and electric-powered vehicles such as electric bikes (e-bikes) and kick style electric scooters (e-scooters), are rapidly emerging as solutions for mobility needs for people of various ages and abilities at the provincial, national and international level. E-bikes build upon the capability of traditional bikes by reducing the physical stress of cycling with electric-power assistance to the pedals, permitting a rider to travel longer and farther than a traditional bicycle.

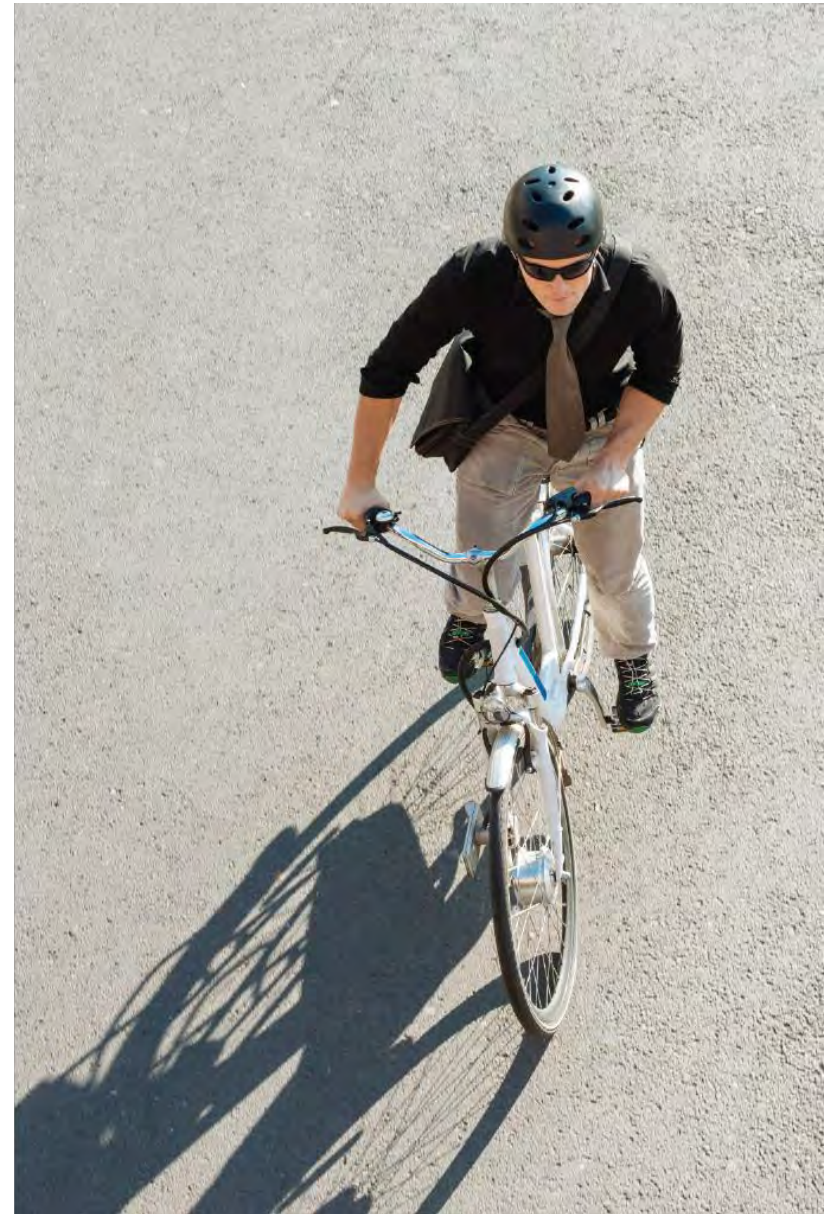
Both bicycle style e-bikes (BSEB) and scooter style e-bikes (SSEB) are defined by Transport Canada, in the Motor Vehicle Safety Regulations of the Motor Vehicle Safety Act, as power-assisted bicycles. Within Canada, the maximum power output of a power-assisted bicycle is 500 watts and within Ontario, a user must be 16 years of age or older to operate the bicycle. **Table 7** illustrates the different types of electric bicycle and scooters and their considerations / components for each.

Table 7 - Overview of E-Bikes

Classification	Type	Function	Maximum Speed	Is this a bicycle in Canada?	Example
Pedelec / Pedal Assisted E-Bikes	Full pedal assist	Pedal-assists motor	32 km/h	Yes	
	Pedal-assist + throttle	Pedal-assists motor and throttle that can replace pedalling	32 km/h	Yes	
Speed Pedelecs (S-Pedelecs)	Full pedal assist	Pedal-assists motor	45 km/h	No (not considered a power assisted bicycle if operating over 32 km/h)	
Scooter Style E-Bikes	Throttle assist + functional pedals	Motor is run by throttle and pedals that can propel the bicycle	32 km/h	Yes	

A power assisted bicycle, such as an e-bike or e-scooter, refers a vehicle that:

- a. Has steering handlebars and is equipped with pedals;
- b. Is designed to travel on not more than three wheels in contact with the ground;
- c. Is capable of being propelled by muscular power;
- d. Has one or more electric motors that have, singly or in combination, the following characteristics:
 - It has a total continuous power output rating, measured at the shaft of each motor, of 500 W or less,
 - If it is engaged by the use of muscular power, power assistance immediately ceases when the muscular power ceases,
 - If it is engaged by using an accelerator controller, power assistance immediately ceases when the brakes are applied, and
 - It is incapable of providing further assistance when the bicycle attains a speed of 32 km/h on level ground,
- e. Bears a label that is permanently affixed by the manufacturer and appears in a conspicuous location stating, in both official languages, that the vehicle is a power-assisted bicycle as defined in this subsection; and
- f. Has one of the following safety features:
 - An enabling mechanism to turn the electric motor on and off that is separate from the accelerator controller and fitted in such a manner that it is operable by the driver, or
 - A mechanism that prevents the motor from being engaged before the bicycle attains a speed of 3 km/h.



In November 2019, the Ministry of Transportation Ontario announced a five-year e-scooter pilot program that will begin on January 1, 2020. As part of this pilot, municipalities can pass by-laws to determine where e-scooters can operate such as municipal roadways, trails and parks. Key elements of the five-year pilot program are outlined below:

- Municipalities must pass a by-law to allow them on municipal roads
- Maximum speed is 24 km/h
- Maximum weight of an e-scooter is 45 kg
- Maximum power output 500 watts
- Minimum operating age is 16
- No passengers allowed
- No cargo may be carried
- No baskets allowed
- Riders must stand at all times
- Bicycle helmet required for those under 18 years old
- No pedals or seat allowed
- Must have 2 wheels and brakes
- Must have horn or bell
- Must have one white light on front, one red light on rear and reflective material on sides
- Maximum wheel diameter 17 inches
- All Highway Traffic Act rules of the road will apply to the operation of e-scooters like bicycles
- Penalties in Highway Traffic Act s. 228(8) will also apply to violations of pilot regulation (fine of \$250 to \$2,500)
- Not allowed on controlled access highways

Figure 25 shows the best practices document the Ministry has created to support municipalities in developing their e-scooter program.

Best Practices

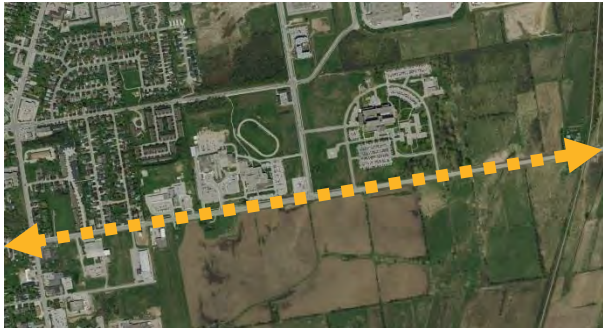
Provincial Requirements	Vehicle and Safety Requirements: <ul style="list-style-type: none"> • Must be electric • No pedals or seat allowed • Must have horn or bell • Must have front and back light • Must have 2 wheels and brakes • Maximum wheel diameter 17 inches • Maximum weight 45 kg • Maximum power output 500W that can provide a maximum speed of 24 km/h • Must be parked in municipally approved parking area(s) <p>Municipalities are required to remit incident/collision and injury-related data to the province upon request.</p>	Operator and Safety Requirements: <ul style="list-style-type: none"> • No drugs or alcohol permitted when operating an e-scooter (consequences under the Criminal Code of Canada may apply) • Must be age 16 or older • Bicycle helmet required for those under age 18 • Riders must stand at all times • No passengers allowed • No cargo may be carried • No baskets • Must not be operated on sidewalks • Not for commercial use
Municipal Considerations	<p>Municipalities that want to allow e-scooters to operate within their boundaries may wish to consider the points outlined below:</p>	
Parking	<p>Municipalities should clearly define where e-scooters can park (e.g. setting up designated parking locations, using corrals). This will help prevent them from being left on the road obstructing traffic or being a nuisance on private property. Designated parking locations provides control over their use and reduces interference with the public. E-scooter parking locations should not block access to businesses, fire doors, or be located outside of restaurants and bars, etc. This will help prevent a hazardous situation.</p> <p>Municipalities should:</p> <ul style="list-style-type: none"> • Establish overnight responsibility for e-scooter non-parking compliance. • Decide who receives the penalty if e-scooter is not parked in a designated location or left stranded. • Decide a penalty structure to apply if e-scooter is not returned to its parking location. • Establish overnight responsibility for e-scooter non-parking compliance. • Decide who receives the penalty if e-scooter is not parked in a designated location or left stranded. • Decide a penalty structure to apply if e-scooter is not returned to its parking location. 	
Operating Parameters	<p>Based on experiences in other jurisdictions, municipalities should develop operating parameters for e-scooter companies and riders. E-scooters should not be allowed to operate on sidewalks – sidewalks are for pedestrians, including persons with disabilities. Municipalities should clearly communicate with companies about their expectations and requirements around contracts, permits, licences, operating agreements, etc.</p> <p>Municipalities to decide:</p> <ul style="list-style-type: none"> • Should a permit be required for an e-scooter business? If yes, clearly define performance standards that companies must adhere to and violation terms. • Where should e-scooters be allowed to travel (e.g. bike paths, parks, trails, etc.)? • Who is responsible for removing e-scooters that are left stranded, damaged or deemed unsafe? • Should there be a limit on the number of e-scooters allowed in certain areas to combat congestion? • How will e-scooters integrate with other road users (e.g. pedestrians, cyclists, and people using personal mobility devices)? 	
Interoperability/Synergies	<p>Municipalities should:</p> <ul style="list-style-type: none"> • Consider how e-scooters can enhance connectivity, mode choice and multimodal access to jobs, housing, goods and services. • Identify ways for e-scooters to help reduce local vehicular congestion and improve air quality. • Where feasible, ensure safe, convenient and adequate e-scooters access/storage at transit stops and stations. 	
Liability	<ul style="list-style-type: none"> • Municipalities should require e-scooter companies to indemnify the municipality and hold appropriate insurance requirements. • Municipalities should determine the appropriate insurance coverage - the type and coverage amounts. 	
Offences	<p>Similar to bicycles, Ontario Highway Traffic Act (HTA) rules of the road apply to the operation of e-scooters in Ontario. Penalties in HTA s. 228(8) also apply to violations of pilot regulation (fine of \$250 to \$2,500). By-law offences may also apply. There are serious consequences for an e-scooter operator impaired by drugs, alcohol or both. Additional consequences under the Criminal Code of Canada may apply.</p>	
More information	<p>This document is a guide only. For official purposes, please refer to the Ontario Highway Traffic Act and regulations. For more information, please visit Ontario.ca/transportation. You may also refer to the American Association of Motor Vehicle Administrators' (AAMVA) Electric Dockless Scooters Whitepaper, and the National Association of City Transportation Officials' (NACTO) Guidelines for Regulating Shared Micromobility.</p>	

Figure 25 - MT0 E-Scooter Pilot Program Best Practices document [here](#)


3.3 USER TRIPS

The types of trips for people biking and using trails are typically organized into three categories – commuter, tourism and recreation. Similar to the user groups identified in section 3.2, people have different preferences when selecting routes and facilities depending on their trip purpose. The County's cycling and trails network has been designed to provide different experiences for different trip types. The following sections provides a summary of the different trip types and typical consideration for each category.


Commuter Trips

Description:	Routes are used day-to-day as a means of accessing key destinations and community facilities. Most commuter trips take place in built-up areas and consist of short-distance travel such as biking to work or walking to school.
User Group:	Most users are confident, skilled and have a good understanding of the rules of the road. Depending on the destination, users may include vulnerable populations such as youth walking to school and seniors walking to a community facility.
Route and Facility Assumptions:	Commuters, specifically cyclists, will use all facilities and are comfortable using shared roadways to more separated facilities. For pedestrians, the route is determined by the destination as opposed to the facility type.
Typical Destinations:	Schools, work, major employment areas, shopping areas and grocery stores.
Route Example:	<div>  </div> <p>8th Street East / County Road 5 (Owen Sound)</p> <ul style="list-style-type: none"> - Direct east-west linkage in Owen Sound. - Connects to Owen Sound Hospital which is both a major employment centre and key destination. - Connects to Georgian College (Owen Sound campus). - Connects where people live to several shops, restaurants, schools, a library and health services.

Recreational Trips

Description:	Routes intended for leisure, explorations and / or health purposes. Trips are typically used for travel on weekends or evenings and will consist of trips to and from destinations of cultural or natural significance. However, given the high proportion of retirees among County residents, a significant amount of regular hiking is done during the weekdays. Off-road trails (including multi-use trails and wilderness trails) are often used for recreational trips.
User Group:	Includes a mix of confident athletes, nervous new cyclists, casual hikers, wilderness hikers, joggers / runners, children and families and healthy seniors (couples, singles and groups).
Route and Facility Assumptions:	Recreational trips typically consist of multi-use pathways including in-boulevard paths and off-road connections through parks, natural spaces and utility corridors, and also includes wilderness trails. Confident cyclists will use major / County roads to access recreational trail systems such as the Grey County CP Rail Trail. In built-up areas, pedestrians use sidewalks to access the trail system as a destination.
Typical Destinations:	Local parks, County forests, conservation areas, Georgian Bay waterfront, major trail systems, provincial parks, community centres and key gathering points.
Route Example:	 <p>Grey Road 7 (Grey Highlands)</p> <ul style="list-style-type: none"> - Builds upon already existing paved shoulders from Grey Road 4 to Eugenia which accommodates pedestrians and cyclists. - Connects to Eugenia Falls Conservation Area which has hiking trails, lookout points, heritage features and a waterfall. - Connects to the Bruce Trail and trail access points. - Connects to Eugenia Lake, a popular recreational destination which has a public beach and boat launch.

Tourism Trips

Description:	Touring users typically engage in long-distance trips to explore different areas. Trips can vary from full day to multi-day excursions and local exploration to regional-scale tourism.	
User Group:	Includes users that are very confident and skilled with a good understanding of the rules of the road. Users are also aware of the existing routes will use for the full-day or multi-day excursion as well as any surrounding bike-friendly businesses and accommodations. Tourists are more likely to require parking, food and lodging. This user group could also include tourists that are part of guided tours (e.g. bussed tourists) who are not aware of trail etiquette or the required skills.	
Route and Facility Assumptions:	Touring trips typically include multi-use trails that form part of long-distance networks as well as wilderness trails. Could also include rural facilities such as paved shoulders, buffered paved shoulders or signed bicycle routes to access surrounding areas.	
Typical Destinations:	Surrounding municipalities, areas of cultural or historical significance, conservations areas and provincial parks and regional trail systems.	
Route Example:		<p>Grey Road 1 (Georgian Bluffs)</p> <ul style="list-style-type: none"> - The road is an existing signed route and connects Wiarton (Bruce County) to Owen Sound with some sections of existing paved shoulder. - The road forms part of three regional trail systems that connect several municipalities in Ontario: Great Lakes Waterfront Trail, Georgian Bay Cycling Route and the Province-wide Cycling Network. - The road itself is considered a tourist destination for cyclists as it offers scenic views of the Georgian Bay and includes a variety of climbs / grades due to its location along the Niagara Escarpment. - Connects to several beaches, lookout points and conservation areas.

3.4 NETWORK CONSIDERATIONS

A cycling and trails network includes more than linear routes and facility types. There are additional components of a network that should be considered beginning at the planning and design stages through to implementation. Throughout the study process, a number of important topics were raised and discussed with County staff and its municipal partners regarding how the network could be implemented, user expectations and municipal roles beyond the lifespan of the plan.

The following section provides information of three network considerations specific to Grey County's cycling and trails network: partial paved shoulders, road surface and liability. Though this master plan is not intended to be prescriptive, the information contained in the following sections is intended to help guide future decision-making as a means to achieve the long-term vision and aspirations for cycling and trails in Grey County.



partial paved shoulders

utilizing the County's already existing partial paved shoulders in select locations to build-out a connected and continuous network for pedestrians, cyclists and other non-motorized users.



road surface

building upon public input to identify select locations in the County where gravel roads can form part of the preferred cycling and trails network, without any improvements to the road.



risk management and liability

understanding who is involved and liability considerations for the County and its municipal partners as cycling and trail activity continues to expand in Grey County and its surrounding areas.

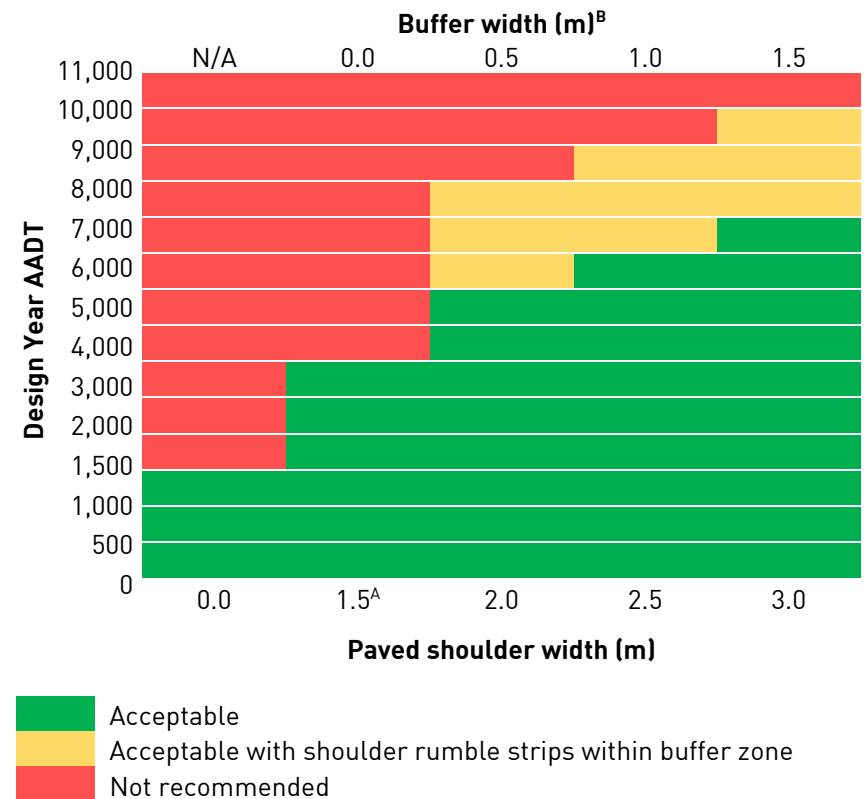
3.4.1 PARTIAL PAVED SHOULDER

A partial paved shoulder refers to a shoulder that is less than 1.5 metres in width. Based on current design guidelines and best practices, the desired width for a paved shoulder that is part of a cycling network is 1.5 metres. In constrained locations, the width of a paved shoulder can be reduced to 1.2 metres to provide a continuous and direct connection along a cycling network. Furthermore, the Ontario Bikeway Design Manual (Ministry of Transportation Ontario) notes that roadways with low traffic volumes and good sightlines may have partial paved shoulders of 1.2 metres (or less).

Figure 26 provides guidance on the selection of paved shoulder widths (and buffer zones) for rural two-lane roads with operating speeds of 70 km/h or more.

There are approximately 113 kilometres of roads that have partial paved shoulders in Grey County, and that form part of the County's cycling and trails network. During the study process, all partial paved shoulders were reviewed by the study team to assess the road condition and width of the partially paved shoulder.

The findings of this review confirmed that along roads with partial paved shoulders, an approximate shoulder width of 0.6 to 1.2 metres has been implemented. Narrow or partial paved shoulders have been implemented in select locations as it would be very cost prohibitive to undertake a full platform widening, acquire additional right-of-way and relocate utility / hydro facilities to achieve a 1.5 metre paved shoulder. In these locations, the approximate width of the motor vehicle lane is 3.5 to 3.75 metres.



Notes:

- In constrained corridors consider providing a minimum paved shoulder width of 1.2 m. Where barriers are present on constrained corridors and paved shoulder widths of 1.2 m are provided, a shy distance of 0.3 m minimum should be provided between edge of paved shoulder and the barrier.
- Buffer zones should be considered on high speed roadways with more than 30 trucks and/or buses per hour.

Figure 26 - Selection of Paved Shoulder Width
Adapted from Ministry of Transportation Ontario Bikeways Design Manual (2014)

On roads that have a partial paved shoulder and form part of the County's cycling and trails network, it is not recommended that any additional road construction be undertaken. It is recommended that these routes be formally marked with a green Bicycle Route Marker sign (OTM sign code – M511) and where necessary, install Share the Road signs (OTM sign codes – Wc-24 and Wc-24t) to indicate a change in the road configuration and alert motorists they are entering a shared space in which cyclists may use the travelled portion of the motor vehicle lane.

As part of future / long-term road capital projects, it is recommended that consideration be given to the following for roads with existing partial paved shoulders:

- If and when a road is next reconstructed, implement a fully paved shoulder (1.5 metres) as part of the road construction; or
- If and when a road is next resurfaced and where there is sufficient edge-to-edge pavement width, narrow and remark the travel lane widths (consistent with the TAC Geometric Design Guide for Canadian Roads) to achieve 1.5 metre paved shoulders.

Section 2.2 provides additional details on the options available for paved shoulder implementation in Grey County.

Figure 27 illustrates the location of all existing partial paved shoulders that form part of the County's cycling and trails network.

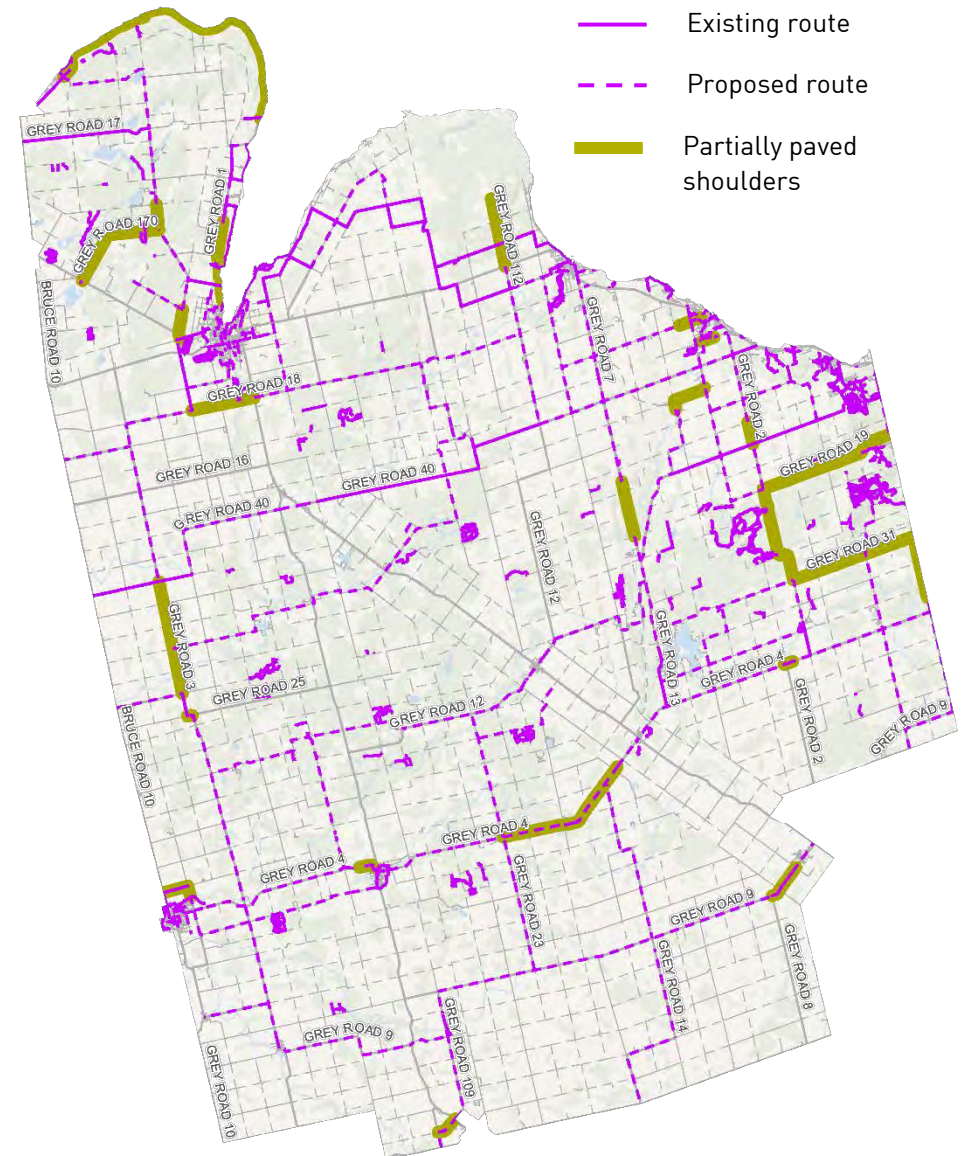


Figure 27 - Existing Partial Paved Shoulders

3.4.2 ROAD SURFACE

The County's cycling and trail network includes on and off-road routes. A majority of on-road routes are located on paved roads, however, some on-road routes are located along gravel roads. The selection of gravel roads to form part of the cycling and trails network was informed by feedback collected from members of the public specifically families with young children and recreational cyclists that want to bike on roads that have low traffic volumes with access to key destinations.

It is not recommended that any road construction or resurfacing be undertaken to gravel roads that have been identified as part of the County's cycling and trails network. These routes were specifically chosen due to their surface type and the low traffic volume that is generated as a result. The network is intended to provide opportunities for different user types and trip purposes; as such, it is anticipated that gravel roads will appeal to people interested in short-distance leisurely bike rides compared to athletes and touring cyclists that use road bikes and that are more interested in long-distance trips or multi-day excursions.

Figure 28 illustrates all gravel roads that are proposed to be included on the County's cycling and trails network.

It is recommended that signage be installed on gravel roads that form part of the County's cycling and trails network. These roads are intended to be signed bike routes and should be marked with the green Bicycle Route Marker sign (OTM sign code – M511). The application of a signed route on gravel roads identified in Figure 28 is consistent with the results from Ontario Traffic Manual Book 18 three-step facility selection tool and in particular the recommended operating space.



Based on the traffic volume and speeds for each road, the desirable operating space for each route is a shared roadway which includes a signed bike route.

In addition to Bicycle Route Markers signs, consideration should be given to installing signage in advance of gravel roads or before major decision points. The Pavement Ends sign and supplementary tab sign (OTM sign codes – Wa-25 and Wa-25t) can be placed before critical decision points to warn cyclists that a connecting route has a gravel surface so users are aware of the change in road surface. Providing signage on road surface can help inform users on their selection routes and whether or not they choose to bike along gravel roads. **Figure 29** illustrates the Pavement Ends sign and supplementary tab sign.

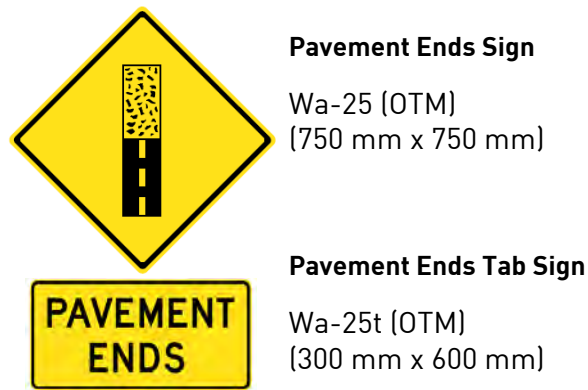


Figure 29 - Pavement Ends Sign and Tab Sign

Only select gravel roads are included in the network where there is known activity of people already biking on these roads. At the time of implementation, it is recommended that County staff and member municipalities re-examine gravel roads to determine whether a signed route is deemed appropriate given the volume of motor vehicle traffic and expected cyclists.



Figure 28 - Existing Gravel Roads on the Cycling and Trails Network

3.4.3 RISK MANAGEMENT AND LIABILITY

The way in which cycling routes and trails are designed and maintained can have a direct influence on liability. On-road cycling facilities are compared to the same liability criteria as roadways and could implicate the County and its municipal partners as partially liable if an incident occurs and the facility is not properly designed, constructed or maintained. For off-road facilities such as trails and in-boulevard paths, those that permit cycling may still require the same treatment. This is due to the fact that a bicycle is considered a vehicle under the Highway Traffic Act and where permitted, may need to adhere to the same requirements as a roadway / highway. Because the courts could make this interpretation, cycling facilities would be considered under many of the same liabilities as other roads. This reaffirms the importance of complying with provincial and national design guidelines and standards as they provide the greatest legal protection.

Along with using existing guidelines and standards to mitigate risk and liability issues, the following methods are recommended for consideration when designing, implementing and maintaining cycling and trail facilities:

- Improving the physical environment, increasing public awareness of the rights and obligations of users (such as the use of signage), 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 route or modification to the existing system, document the assessment tool used to select the preferred facility; and
- Exercise good engineering judgement when applying design guidance during the functional design process.

CHAPTER 3 RECOMMENDATIONS

Recommendation	Plan Objectives Achieved									
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies	
8. It is recommended that County staff and its partners reference the guidelines and standards identified in section 3.1 when moving forward with the planning, design and implementation of cycling and trails infrastructure.									✓	
9. It is recommended that consideration be given to the travel lane widths consistent with the Transportation Association of Canada Geometric Design Guide for Canadian Roads (see section 3.1.2) when roads identified on the County’s cycling and trails network, are next scheduled for resurfacing / reconstruction to implement paved shoulders (desired width of 1.5 metres) if and where possible.	✓	✓			✓				✓	
10. The County should identify significant trail crossings and explore options for implementing crossings and structures that reflect the design of the trail to provide a greater sense of connectivity.		✓	✓	✓			✓		✓	
11. County staff should develop a wayfinding strategy for the cycling and trails network. Building upon a wayfinding strategy, a pilot project can be implemented to test the functionality of the wayfinding system and get feedback from users (refer to section 3.1.4).							✓	✓	✓	
12. The County should review and adopt the appropriate risk management and liability prevention strategies into day-to-day decision making related to cycling and trails planning, design and maintenance.									✓	





CHAPTER 4

Implementing the Plan

Implementation of the Cycling and Trails Master Plan will require strategic recommendations that are realistic, consistent with the County's existing processes and flexible enough to respond to future opportunities. The information contained in the following chapter is not intended to be prescriptive nor commit the County and its partners to future funding or a schedule of projects. This information should be used as a guide to inform future decision-making, prioritization and next steps on how to roll-out the Cycling and Trails Master Plan.

Implementation is more than phasing and costing – it speaks to proposed tools and strategies to guide the on-going implementation of cycling and trail projects beyond the lifespan on the plan. The final chapter of the County's Cycling and Trails Master Plan outlines suggested programming initiatives, partnerships and supportive tools to establish a recommended implementation plan.

The recommended implementation plan builds upon the County's current capital budget, resources and standards. It is recommended that the County and its partners use this information as a blueprint to facilitate implementation, communicate future goals and guide for future policies related to cycling and trails.

4.1 PHASING

The proposed phasing for the County's cycling and trails network is organized into two phases over a 10+ year horizon. A phasing horizon has been identified for each proposed route included in the network based on the following considerations:

Phase 1: Short Term (2020 to 2029)	Phase 2: Long Term (2030 and beyond)
<ul style="list-style-type: none"> - Coordination with large scale infrastructure projects identified in the County's current ten-year capital plan. - Low investment projects that enhance one (or more) of the County's cycling loops. - Quick wins (such as signed routes) to complete a gap between two existing routes. 	<ul style="list-style-type: none"> - High profile connections that will require future studies to confirm feasibility and design. - Corridors that have already been reconstructed and not scheduled for any upgrades in the short term. - Major investments in rural areas.

Maps 3a and 3b illustrate the proposed phasing. An overview of the proposed phasing is presented in **Table 8**.

Table 8 - Phasing Overview for the Cycling and Trails Network

Facility Type	Short term (km)	Long term (km)	Total (km)
Paved Shoulders	120.3	116.4	236.7
Signed Routes	249.2	174.4	423.6
Off Road Trails	0	1.7	1.7
Edge Lines	3.2	1.3	4.5
Bike Lanes	0.8	3.1	3.9
Buffered Bike Lanes	0.9	0	0.9
Buffered Paved Shoulders	0	60.5	60.5
In-boulevard Pathways	0	1.4	1.4
Total	374.4	358.9	733.2



Map 3a

Grey County

Proposed Phasing

Grey County Cycling and Trails Master Plan | October 2020

Legend

Cycling and Trails Network

Existing Proposed

- On-road Route
- Off-road Route

Proposed Phasing

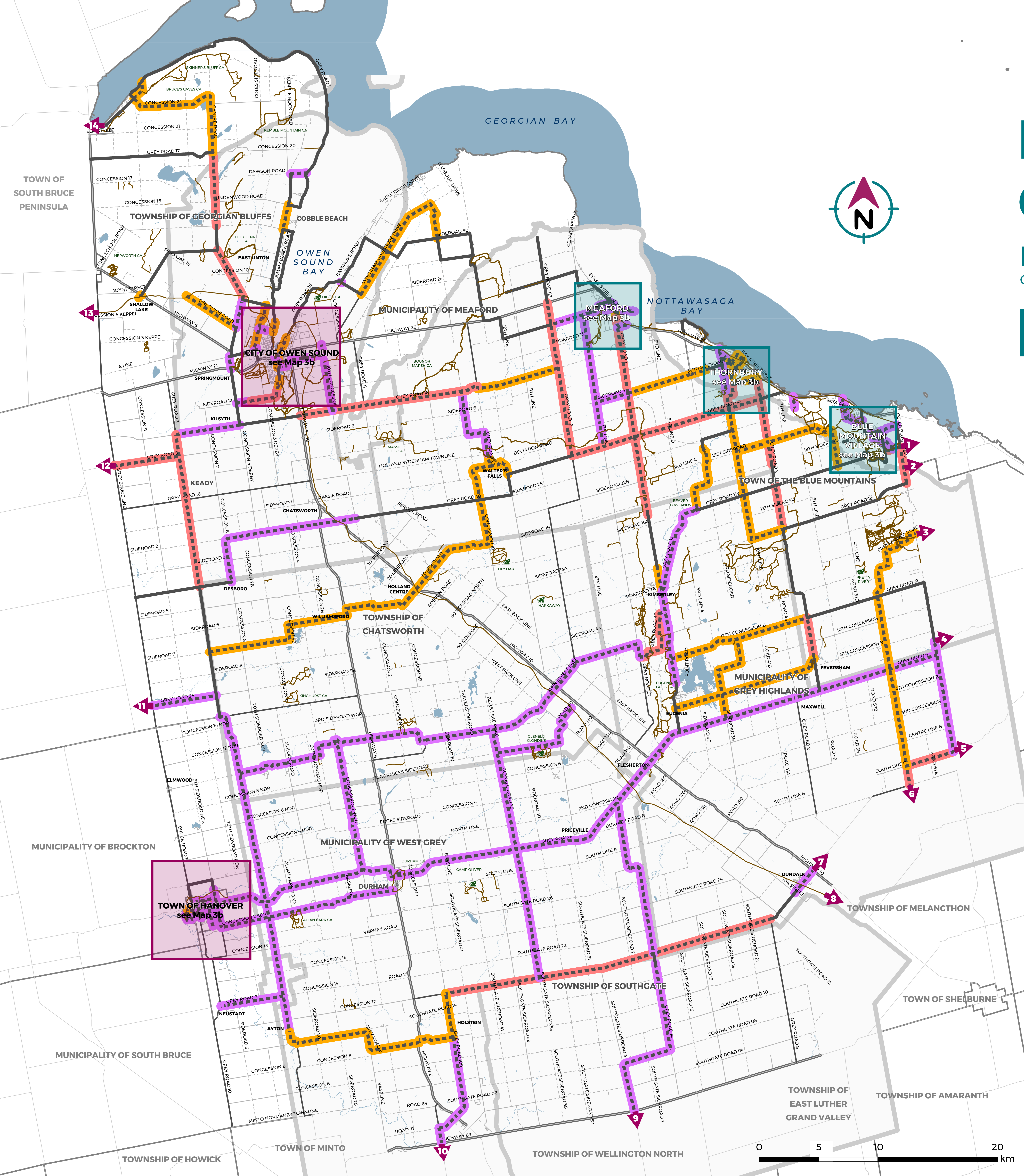
- Phase 1 (Capital Projects 2020 - 2029)
- Phase 1 (Additional Projects 2020 - 2029)
- Phase 2 (Long-term Future Projects)

Transportation Features

- Provincial Road
- County Road
- Municipal Road (paved)
- Municipal Road (gravel)

Land Use Features

- Waterbody
- Municipal Boundary

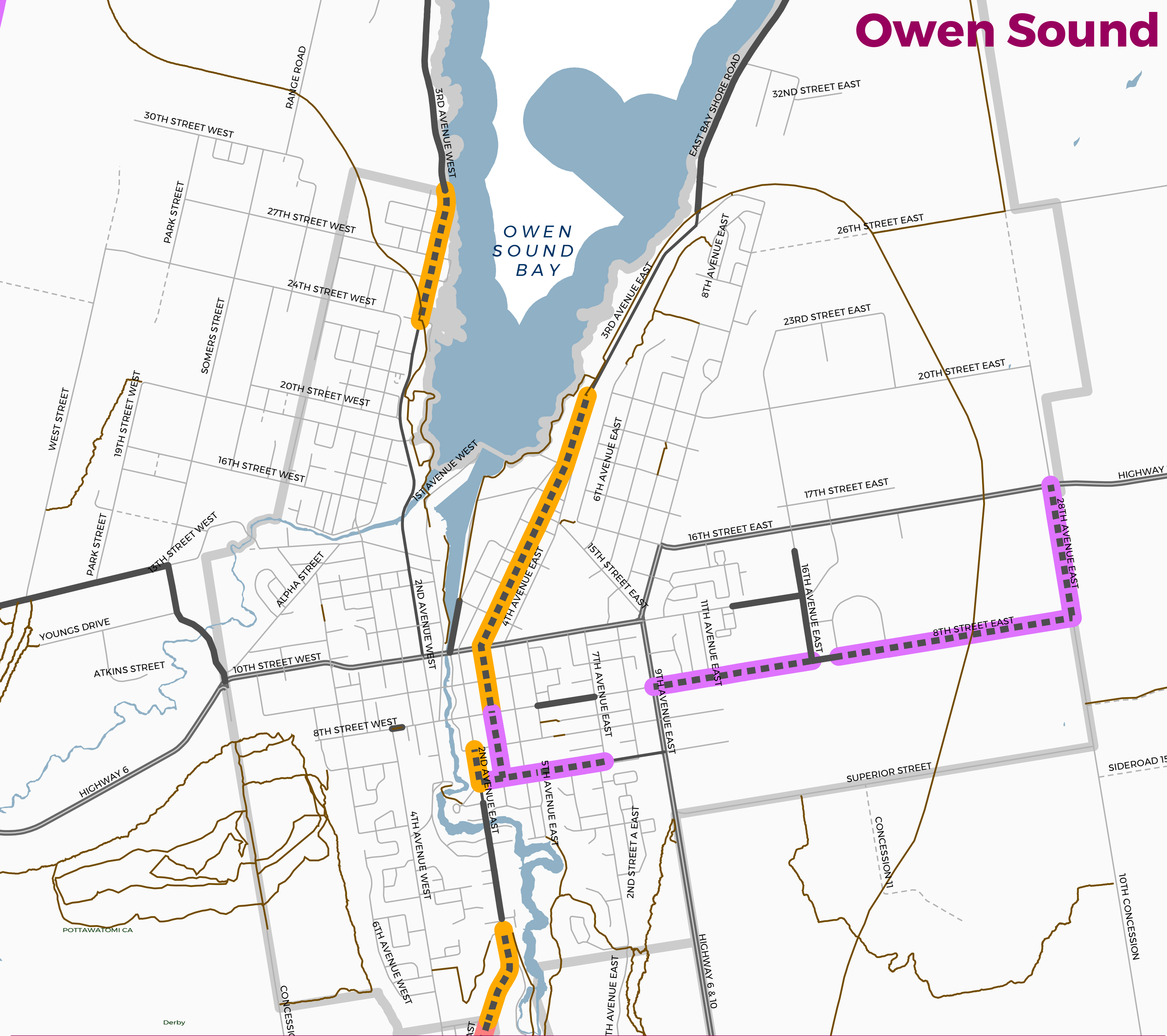


Notes:

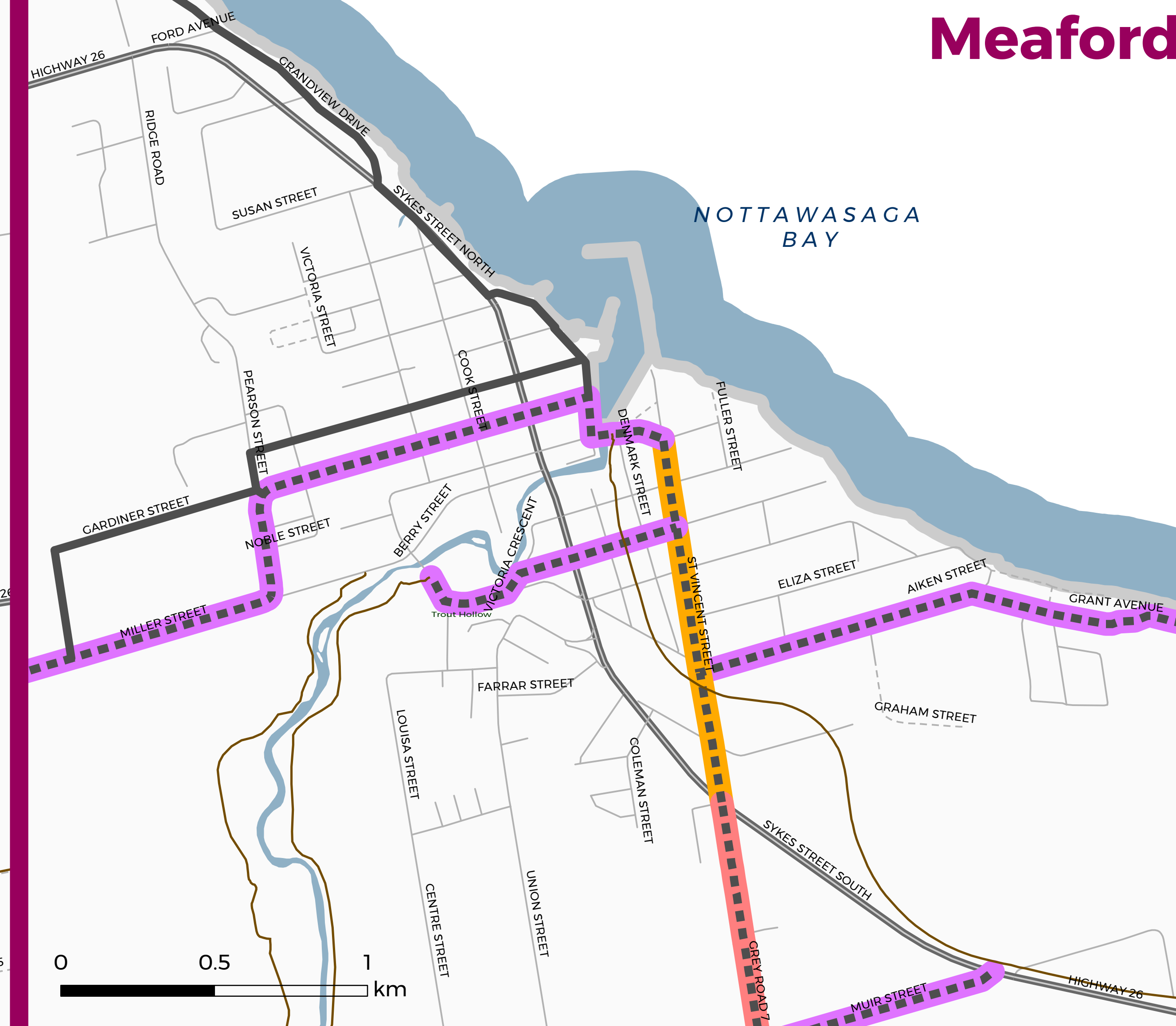
Refer to Appendix E for cycling and trail routes located on local roads and lands within the City of Owen Sound as per the City's Official Plan - Schedule D - Active Transportation and Trails Master Plan Model.

Connections to Surrounding Municipalities

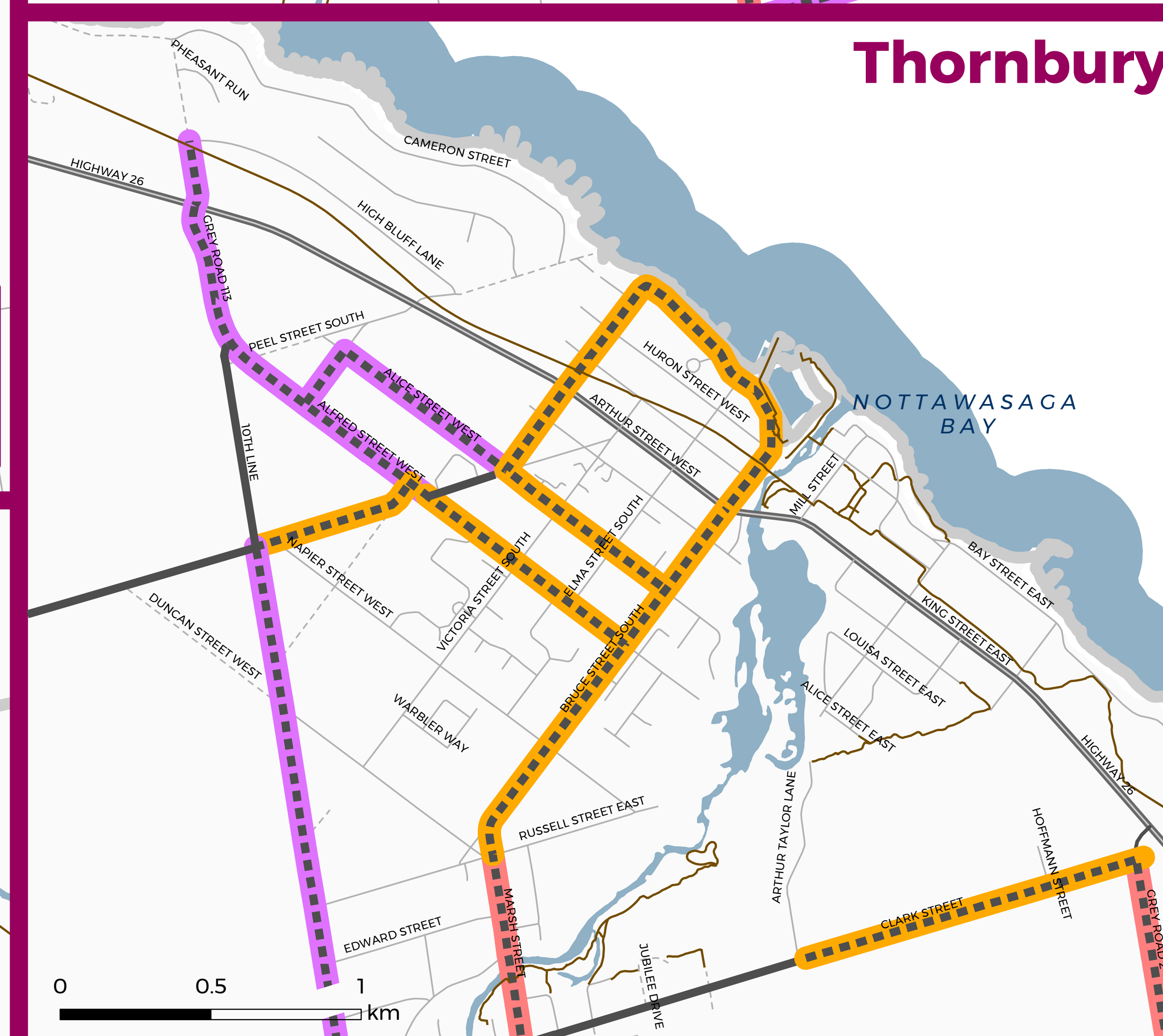
- 1-5 proposed on-road route (Simcoe County TMP 2014)
- 6-7 proposed paved shoulder (Dufferin County AT Master Plan 2010)
- 8 proposed off-road trail (Dufferin County AT Master Plan 2010)
- 9 to Arthur, Wellington County
- 10 to Minto, Wellington County
- 11 to Chesley, Bruce County
- 12 to Tara, Bruce County
- 13 to Park Head, Bruce County
- 14 to Wiarton, Bruce County



Owen Sound

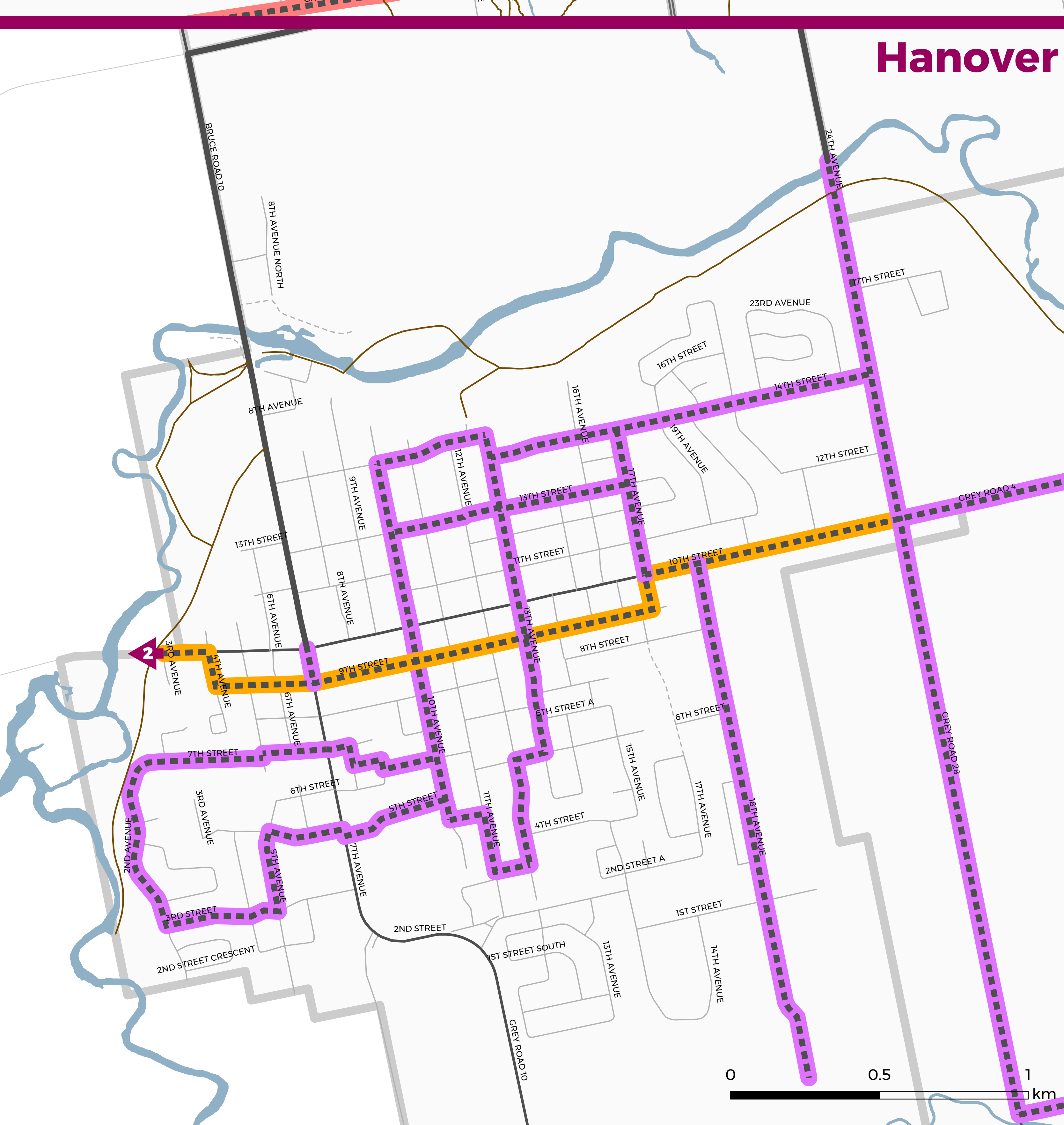


Meaford

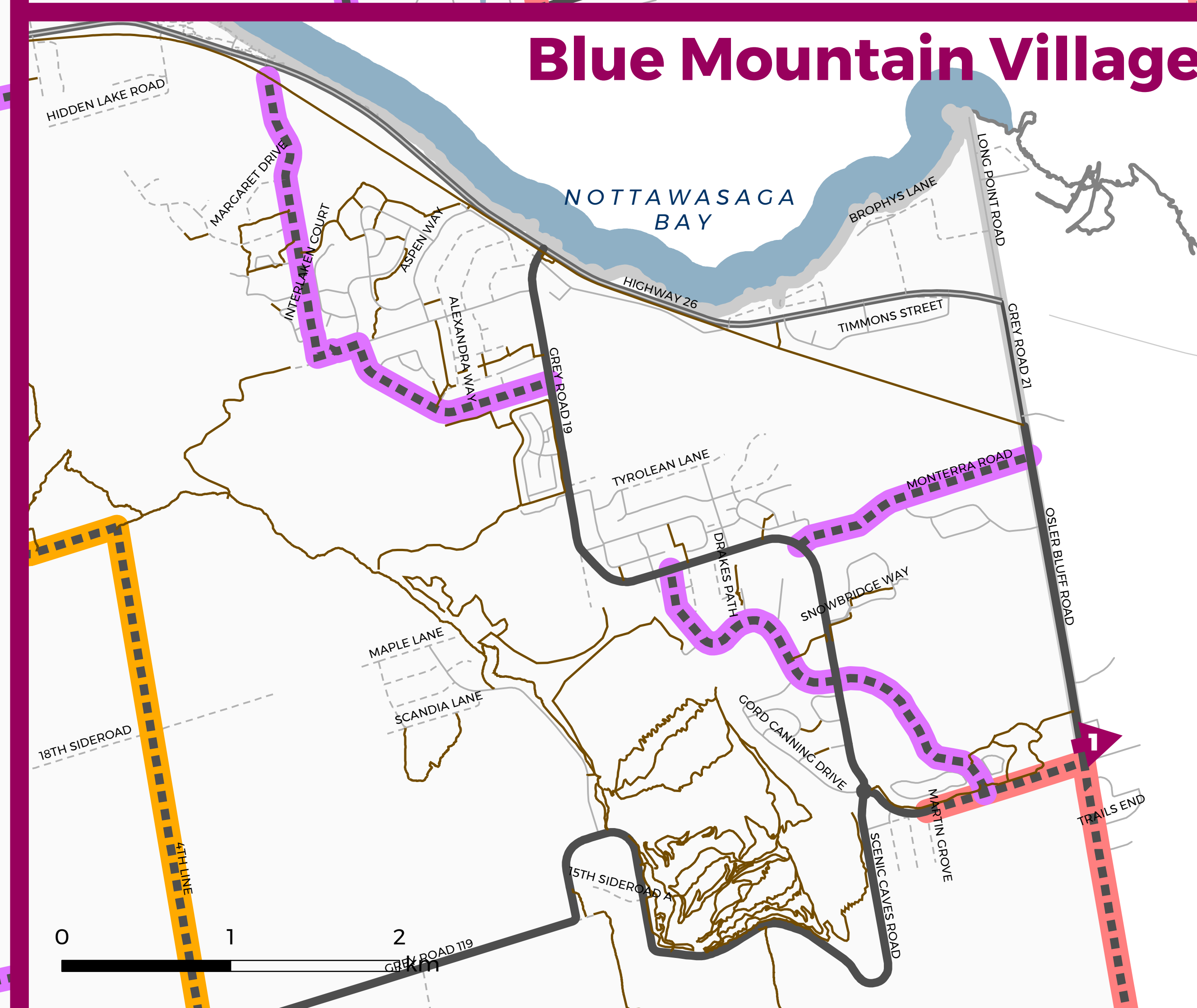


Thornbury

Refer to Appendix E for cycling and trail routes located on local roads and lands within the City of Owen Sound as per the City's Official Plan - Schedule D - Active Transportation and Trails Master Plan Model. Only routes proposed on County roads have been identified for the City of Owen Sound.



Hanover



Blue Mountain Village

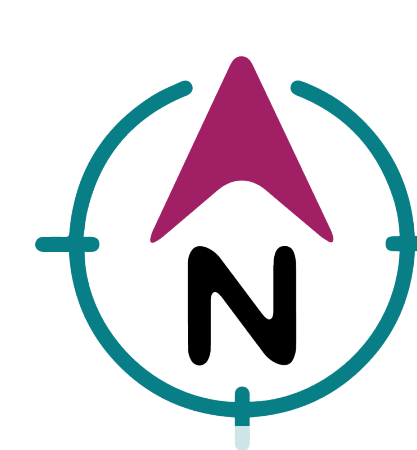
Map 3b Built-up Areas

Proposed Phasing

Grey County Cycling and Trails Master Plan | October 2020

Legend

Cycling and Trails Network		Transportation Features	
Existing	Proposed		
			Provincial Road
			County Road
			Municipal Road (paved)
			Municipal Road (gravel)
Proposed Phasing		Land Use Features	
	Phase 1 (Capital Projects 2020 - 2029)		Waterbody
	Phase 1 (Additional Projects 2020 - 2029)		Municipal Boundary
	Phase 2 (Long-term Future Projects)		



Notes:
Refer to Appendix E for cycling and trail routes located on local roads and lands within the City of Owen Sound as per the City's Official Plan - Schedule D - Active Transportation and Trails Master Plan Model.

Connections to Surrounding Municipalities

- 1 proposed on-road route (Simcoe County TMP 2014)
- 2 to Walkerton, Bruce County

Though the Cycling and Trails Master Plan presents information for both short and long-term horizons, the focus for implementation of the network is in the short term to reflect the County's existing budgeting process and capital plan. As such, it is recommended that the short-term phasing be reviewed by County staff on an annual basis to ensure it remains consistent with available resources at the time of implementation.

As part of developing the plan, routes within the short-term phase were identified one of two ways:

1. **Projects that align with Grey County's Capital Plan:** includes routes that can implemented with planned roadway improvements identified in the County's current capital plan
2. **Projects that do not align with Grey County's Capital Plan:** includes routes that are not associated with any planned roadwork or construction. These routes will require additional funding - refer to section 4.5 for an overview of potential funding sources that can be explored. Only select routes have been identified for the short term where there is no link to the current capital plan based on strategic location: low investment to formalize a facility on a County's cycling loop; or low investment to add a facility to connect two existing routes.

Additional details on the phasing and short-term horizon (including the two categories above) is provided in **Appendix D**.

The phasing breakdown is intended to be reviewed by County staff on an annual basis to ensure that it remains relevant and aligns with planned capital projects and County priorities. Likewise, County staff are encouraged to seek potential opportunities, where feasible, to advance long-term projects as part of scheduled capital works should any opportunities arise through future annual budget reviews.



4.1.1 LONG-TERM NETWORK CONSIDERATIONS

The long-term phase reflects projects that are scheduled beyond the County's current capital plan as well significant corridors that could require planning approvals and significant investment prior to implementation. It is recommended that the County continue to work with member municipalities and partners in the future to ensure on-going implementation of the cycling and trails network, and advancements of routes in the long-term.

Based on context-specific considerations, two prominent routes have been phased in the long-term horizon. The identification of their phasing is not intended to undermine the importance of these linkages within the County's cycling and trails network. Rather, it is recognized that these routes are key projects that will require additional funds and resources to implement beyond what is currently available in the short term. These routes include:

Frog's Hollow Road (4th Sideroad) is a popular route for cyclists riding between Thornbury and Meaford. The road provides an alternate, scenic and quiet connection compared to Highway 26, and it forms part of the County's Thornbury Heathcote cycling loop. The road surface is in poor condition and there are some sightline constraints for cyclists and motor vehicles on the approaches due to grades along the road. In addition, the existing road platform is narrow and there is not sufficient width to implement a separated cycling facility. Though Frog's Hollow Road is not identified in the Municipality of Meaford's capital plan for improvement, it is recommended that consideration be given to paving a "climbing lane / shoulder" on both sides of the road (along sections of the road where this is an incline), if and when the road is next scheduled for improvement or upgrade in the Municipality's capital plan.



In May 2020, Meaford Council passed a motion and improved implementation of paved shoulders (climbing lanes) on Frog's Hollow Road. Motion was passed for Municipal of Meaford staff to obtain contractor quotes for:

1. A paved shoulder on the eastern uphill 800 metres of 4th Sideroad, up to 1.25m wide;
2. A paved shoulder on the downhill 800 metres of 4th Sideroad, up to 0.75m wide; and
3. Line painting on this first 800 metres to delineate the paved shoulder.

Grey Road 4 is a significant east-west linkage through the County that connects from Hanover in the west to the border with Simcoe County in the east. There are few alternatives on the County's road network that provide the same expansive east-west direct connectivity through the County. The recommended facility on Grey Road 4 is a buffered paved shoulder due to the roadway characteristics: high motor-vehicle volumes, high operating speeds and high truck traffic. The surface condition on Grey Road 4 is good and no road improvements or reconstruction are scheduled in the near future, as such, this route has been phased as a long-term project.



4.2 COSTING

Implementing the proposed cycling and trails network will require funds and resources from the County and other partners on an annual basis. Annual funding for construction, maintenance, operations and programming should be identified in the County's annual budgeting process to strategically implement the cycling and trails network over time. In addition, the County should explore additional funding sources to maximize budget efficiencies and coordination with other major projects (refer to section 4.5 for additional details on potential funding sources).

An estimated cost to implement the County's cycling and trails network has been developed. Cost estimates are based on a set of unit prices presented in **Appendix D** and input provided from County staff. The unit prices reflect 2020 dollars and are based on best practices from various municipalities in Ontario. It is recognized that the level of effort will vary on a project-by-project basis and some projects may reflect higher unit costs than others. The unit prices:

- Do not include the cost of property acquisition, signal modifications, utility relocations, major roadside draining works, or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and stairways;
- Assume typical environmental conditions and topography; and
- Do not include applicable taxes and permit fees (which are considered additional).

As noted in section 4.1, the focus for implementation of the cycling and trails network is in the short term to reflect the County's existing budgeting process and capital plan. Therefore **Table 9** presents the estimated cost to implement the cycling and trails network in the short term. The table is organized into the following two categories:

- Short Term (projects that align with Grey County's Capital Plan)
- Additional Short Term Projects (projects that do not align with Grey County's Capital Plan)

The total estimated cost to implement the County's cycling and trails network is approximately \$3.5 million in the short term (2020 to 2029). Approximately 88% (or \$3.1 million) of the total cost is anticipated to be integrated into planned roadway projects identified in the County's capital plan. A breakdown of estimated costs by jurisdiction is presented in **Table 10**.

Detailed costing information is contained in **Appendix D**. It is recommended that this appendix be used as a tool by County staff to track the progress of implementation of the network and to inform future budgeting and decision making.

Table 9 - Summary of Estimated Costs in the Short Term by Facility Type

Facility Types	Projects that align with the County's Capital Plan		Additional Projects (projects do not align with the County's Capital Plan)		Short Term Total	
	Length (km)	Cost	Length (km)	Cost	Length (km)	Total
Paved Shoulders	117.3	\$3,026,342	3.0	\$128,106	120.3	\$3,154,448
Signed Routes	37.5	\$38,819	211.7	\$214,058	249.2	\$252,877 ¹
Off-road Trails ²	0	\$-	0	\$-	0	\$-
Edge Lines	0	\$-	3.2	\$10,140	3.2	\$10,140
Bike Lanes	0	\$-	0.8	\$13,178	0.8	\$13,178
Buffered Bike Lanes	0	\$-	0.9	\$37,667	0.9	\$37,667
Buffered Paved Shoulders	0	\$-	0	\$-	0	\$-
In-boulevard Pathway	0	\$-	0	\$-	0	\$-
Total	154.8	\$3,065,161	219.5	\$403,149	374.4	\$3,468,310

Note:

1. The total estimated cost of signed routes is not intended to commit the County to the implementation of all signed routes in the short term. Implementation of signed routes will be rolled-out on a priority basis and determined by the County and its partners on an annual basis.
2. Though off-road trails are not identified for short-term implementation, it should be noted that the County's Tourism department has allocated (in 2020) \$15,000 for trails / outdoor activity infrastructure projects.

Table 10 - Summary of Estimated Costs in the Short Term by Jurisdiction

Jurisdiction	Length (km)	Total Cost
Grey County	201.2	\$3,291,772
City of Owen Sound	Refer to Appendix E for cycling and trail routes in Owen Sound as per the City's Official Plan.	
Municipality of West Grey ¹	0	\$-
Municipality of Meaford	26.8	\$28,614
Township of Georgian Bluffs	21.1	\$21,790
Municipality of Grey Highlands	61.7	\$61,698
Town of Hanover	1.7	\$2,077
Township of Southgate	2.9	\$2,883
Town of The Blue Mountains	22.6	\$23,150
Township of Chatsworth	36.0	\$36,043
Province of Ontario	0.3	\$283
Total	374.4	\$3,468,310

Note:

1. Only routes located on County roads are part of the short-term cycling and trails network within West Grey. Therefore, the cost to West Grey is \$0 in the short term. This does not capture the 62 kilometres of routes located on West Grey roads that are phased in the long term.

4.3 PROGRAMMING

A successful master plan should look beyond the physical routes and facility types. To support a culture of active living and enhanced recreation, there are a number of programs and initiatives that can help build community awareness, encourage behaviour change and promote the County's existing tourism assets. The following section outlines recommended programs and initiatives that could be implemented in Grey County to help to supplement the recommended infrastructure and help the County achieve its long-term vision and aspirations for cycling and trails.

4.3.1 INSTITUTIONAL SUPPORTS

Key to the delivery of new programs within Grey County is the development of a strong set of internal supports for cycling and active transportation, including clear lines of communication between the County and the member municipalities.

It is recommended that the County **establish two committees: a Cycling Committee and Off-Road Trails Committee**. Both committees could include representation from all member municipalities, partners and stakeholder groups to help facilitate more frequent discussions regarding the implementation of this plan and other opportunities as they arise. It is recommended that each committee meet on a quarterly basis to discuss on-going implementation, to plan upcoming investments and to develop messaging / promotional materials.

In addition to regular committee meetings, it would be beneficial for the Cycling Committee and Off-Road Trails Committee to **host annual meetings (separate)** to update other stakeholders in the County, including tourism operators, community advocates, cycling clubs, other trail groups and more. These meetings would build on the collaborative work that the development of this plan has started as well as the existing strong partnerships between the County and its community partners to provide a higher degree of transparency and accountability to the residents of Grey County regarding how the plan is being implemented.

programming...

Refers to various initiatives and actions that can help achieve the six elements of successful master planning. These include:

educating: teaching people of all ages and abilities the skills they need to use bike, trails and active transportation infrastructure safely for different trip purposes. This would include road safety training ensuring users can operate a bicycle on a roadway safely and consistently.

encouraging: generating support for biking and other active transportation modes as a viable mode for day-to-day travel, recreation and tourism.

enforcing: ensuring safety for all users by applying roadway laws and regulations in a consistent and effective manner.

evaluating: monitoring the "success" of a plan including infrastructure, programs and planning as well as undertaking complementary initiatives / programs to reinforce biking, trail use and active transportation in the County.

engineering: providing safe and convenient places to walk and bike, and designing land uses which are supportive of active forms of transportation – this is typically addressed through the recommended routes and facility types in a master plan.

equity: providing mobility choices that are equitable and accessible for more vulnerable populations such as youth, seniors, and low-income persons.

In addition to establishing the two committees, it is suggested that Grey County also establish a **municipal partnership fund** to provide assistance and incentives to member municipalities as they work to create links to connect to the county-wide cycling and trails network. This partnership fund should permit municipalities to submit proposed municipal capital projects to the County for funding if the municipality can demonstrate that the project would lead to a meaningful improvement in either the cycling and trails network, or in providing enhanced connectivity from a local cycling route or cycling amenity to the County's network. These types of funding partnerships have been used successfully in regional municipalities such as Essex County and the Regional Municipality of York to accelerate the implementation of a complete network, which joins together the municipal routes to the broader regional network, providing increased opportunities for cycling and trails for visitors and residents alike.

Table 11 outlines the suggested actions as well as supportive elements and best practices for institutional support of the Cycling and Trails Master Plan.

Table 11 - Suggested Actions for Institutional Support

Suggested Action	Elements for Success	Best Practices
1. Create a Cycling Committee and Off-Road Trails Committee	<ul style="list-style-type: none"> - Committees to include representatives from all member municipalities. - Committees to meet quarterly to discuss implementation of this plan. - Develop shared messaging, branding and communications strategies to promote cycling and trail use. 	<ul style="list-style-type: none"> - Provide discretionary budget to each committee to deliver events and support for local groups. - Use existing staff resources (and potentially look a hiring a Regional Active Transportation and Trails Coordinator) to work with each committee to coordinate efforts across municipalities and ensure there are adequate resources available to implement the plan. - Work with other committees to advance implementation of the plan through common goals and interests such as sustainability, climate change mitigation, etc.
2. Host Annual Trails and Cycling Meeting	<ul style="list-style-type: none"> - Once a year, provide users of the cycling network and trails with an update and opportunity to provide input. 	<ul style="list-style-type: none"> - Produce annual report cards documenting the implementation of this Plan to communicate success with the community on an ongoing basis.
3. Establish a Trails and Cycling Municipal Partnership Fund	<ul style="list-style-type: none"> - Provide funding to member municipalities to construct elements of the cycling and trails network that fall on roads under their jurisdiction. 	<ul style="list-style-type: none"> - Expand funding availability for connections between municipal routes and the County's network, with a specific focus on providing 1 or 2 marquis routes and experiences in the County such as the Great Lakes Waterfront Trail and / or the Grey County CP Rail Trail.

4.3.2 CYCLE AND TRAILS TOURISM SUPPORT

Grey County's existing support for cycle and trails tourism is already well established, and the County continues to be a significant draw for all types of people cycling - from touring riders to road cycling enthusiasts to people seeking single track or downhill mountain biking. In addition, the availability of extensive trails systems (including but not limited to the Bruce Trail, Kolapore Wilderness Trails, etc.) draws hikers from all around Ontario and beyond to Grey County to explore the County's natural beauty.

In terms of providing even stronger support for cycle tourism in Grey County, it is suggested that the County follow the approach taken by Niagara Region to significantly enhance the ease of planning and discovering the various cycling-friendly amenities that exist within the County by **creating a website specifically dedicated to cycle tourism in Grey County**. While Grey County's existing website does list many cycling amenities, it is challenging to refine those experiences and amenities beyond a simple interest in "cycling". The Niagara Cycling Tourism Centre website ([here](#)) is organized into a very easy navigation, providing prospective visitors with a plethora of information about routes, accommodations, amenities and more. Importantly, the Niagara Cycling Tourism Centre website is also available in French - reflecting the strong demand for out-of-province visitors to come and visit. As Grey County continues to grow the level of support for cycling and trails use, it is recommended that the County also offer promotional materials in French to reach further into the Quebec cycling market. Work with local cycle tourism operators to develop a website that serves the needs of visitors on bikes, and ensure that it is kept up-to-date as this plan is implemented.

Trails use is an important aspect of the County's attraction to visitors and residents alike. As trails become more popular in the County, there is a need to clearly define which types of use are permitted on the trails during which seasons. Some trails that had previously been destinations for mountain biking and hiking, such as Glenelg Klondike, have been subjected to increased ATV usage, resulting in the deterioration of trail conditions. Trails that are heavily used by ATVs become significantly less attractive to active trail users like hikers and cyclists, so improving barriers to prevent trespassing and increasing enforcement efforts may be options to consider for some of the County's trails in order to preserve them for active use into the future and reduce maintenance costs. The County's Recreational Trails Master Plan outlines a number of recommended guidelines as it relates to trail maintenance, promotion, user groups, etiquette and enforcement. In addition, detailed maps and reference guides are available through the Bruce Trail Conservancy which people can access through a mobile application (available for iOS and Android devices). There are many segments of the Bruce Trail and other trails that exist in County Forests that are susceptible to erosion that may be exacerbated by mountain bike use. It is important to ensure that user types for trails are clearly defined, and are widely understood in all communications coming from the County and any of its partners.

An important consideration for the County as more people consider visiting Grey to ride bikes or use the trails is the **provision of detailed, experience-oriented maps**. Routes should have clear information about length, difficulty, topography and available amenities. Access to important amenities like washrooms, bike repair stands, water fill stations and rest areas should be clearly communicated on all route maps, and mapping should be made available in as many forms as possible to ensure that users can download and access information, or

can access it through a print map if preferred. **Table 12** outlines the suggested actions as well as supportive elements and best practices for cycling and trails tourism in Grey County.

Table 12 - Suggested Actions for Cycling and Trails Tourism Support

Suggested Action	Elements for Success	Best Practices
1. Create dedicated Cycling and Trails in Grey County websites	<ul style="list-style-type: none"> - Provide a user-friendly experience for people considering visiting Grey County for a cycling and / or trail tourism trip. - Include important amenities like washrooms, accommodations, restaurants, wineries / cideries / breweries. - Provide detailed itineraries for trail and bike trips, including level of difficulty and type of terrain. - Provide all information in English and French 	<ul style="list-style-type: none"> - Add bike routes and trails to OpenStreetMap network to provide open-source access and allow users to import routes into GPS services - Create “postcards” for routes (bike routes and trails) featuring highlights and important details (i.e. difficulty, key stops, length) with QR Code links to more details. Share cards with local businesses.
2. Clarify user groups for trails	<ul style="list-style-type: none"> - Create clear delineations between trails that are only for hiking, trails that are available for all active use (hiking and cycling) and trails that are available for ATV use as well. - Build upon the information from the County’s Recreational Trails Master Plan (here) and other partnering agencies (e.g. BTC) to inform user groups and permitted activities on various trails within Grey County. 	<ul style="list-style-type: none"> - Where active trail use is preferred and where ATV groups are not providing additional funding for maintenance, consider stricter enforcement of no motorized vehicles on trails to enhance the experience of people walking and cycling. - Liaise with agencies that could be impacted by various user groups and trails located on lands throughout the County such as the BTC and the Province of Ontario (trails on Crown Lands).
3. Leverage the existing County Tourism Resources to create a series of detailed, experience-oriented route maps	<ul style="list-style-type: none"> - Consider partnering with local bike shops and tourism operators to offer self-guided bike and hike routes through the RideSpot application (here). - Work to expand the awareness and enrollment in the Ontario By Bike Program in Grey County. 	<ul style="list-style-type: none"> - Offer incentives for businesses that attain Ontario By Bike Certification. - Link trails and outdoor areas to attractions, services and businesses (downtown).

4.3.3 EVERYDAY CYCLING IN GREY COUNTY

Everyday Cycling refers to the idea that everyday trips - to the grocery store, the post office, to go out for a coffee with friends - can be taken by bike. These trips, which often start and end within the same municipality, are short and would be realistic by bike in a short time. These trips are ones with a destination in mind; they are not a recreational ride, but they may not always be captured in the “Journey to Work” data as collected by Statistics Canada.

Within Grey County, there are many opportunities to expand the number of Everyday Cycling trips. In each built-up area within the County - places like Hanover, Markdale, Owen Sound, Thornbury, Durham and more, many of the amenities necessary for daily life - grocery stores, hardware stores, cafes, restaurants and gathering places like community centres or churches are all easily accessible to those who live within the same built-up area via a short (often under 2 kilometre) bike ride. This is not to say that all residents of Grey County can access amenities by bike. The County’s rural nature means that some residents travel long distances to get to the things that they need each day, but for those who reside within a built-up area, increased active transportation is a realistic possibility. One of the ways that the County can assist its member municipalities in encouraging more Everyday Cycling is to work with the municipalities through the Cycling Committee (see section 4.3.1) as well as local clubs / organizations to develop a series of resources to help educate residents about the benefits of active transportation and to provide encouragement to help people change their habits. For example, the County can reach out to local organizations including but not limited to the Owen Sound Cycling Club, Collingwood Cycling Club, Saugeen Triathlon Club, etc. to help distribute educational and promotional resources / information.

One of the most important places to begin in terms of promoting Everyday Cycling is to provide support for **Active School Travel Programs** within Grey County. While many students within the County are bussed, there are still opportunities to encourage active travel for those students who live close enough to school, and to leverage existing resources within schools to create healthy habits for life. As part of efforts to support active school travel, consider making resources available to member municipalities to start their own **Walking School Buses**¹ to help children get to school actively and safely. Also consider creating a **Bike Rodeo Toolkit** so that schools can deliver bike rodeos easily - helping to provide students with the skills they need to ride safely and legally. Existing resources and partners can be leveraged to continue efforts of encouraging active travel for youth and school-aged children. For example, the Saugeen Valley Children’s Safety Village² is a not-for-profit registered charity that offers interactive and educational safety programs that are designed to prevent childhood injuries and fatalities. This Saugeen Valley Children’s Safety Village has partnered with schools in Grey and Bruce Counties to provide safety programs to school-aged children including road / bike / pedestrians safety and outdoor / sports / recreational safety.

¹ <https://transitionbrockville.com/2018/09/25/walking-the-rural-way-in-leeds-grenville-and-lanark/>

² <https://www.saugeenvalleycsv.ca/index.php>

A proven method for building interest in active transportation and cycling is the provision of a dedicated **Bike Month**. Consider creating a dedicated website where residents can find information for all events taking place during Bike Month, then work with member municipalities to populate the calendar and create a variety of events designed to get more people riding their bikes in Grey County.

While it will be important for each member municipality to establish their own Bike Month Planning Committee to deliver local events tailored to their specific community, the County can play a leadership role by developing further resources that can be shared among all of the member municipalities as they plan their local Bike Month. Examples of ways that the County can lead the development of Bike Month materials include:

- Establish a consistent Grey County Bike Month brand, and ensure that it appears in every municipality's Bike Month promotional materials;
- Promote Bike Month on social media channels, linking viewers to the calendar of events for the County;
- Create a Grey County Bike Month website, and work with member municipalities to ensure that all events are input into the online Calendar and promotional materials are prepared and distributed;
- Encourage municipalities to host events and publicize them in a Grey County Bike Month guide, which could be published in May during the lead up to Bike Month;
- Create "how-to" guides for popular events – Bike to Work Day breakfasts, community rides, bike maintenance workshops etc., and distribute them to local partners to help them move the planning process along. For inspiration see Share the Road's Bike Event cards [here](#); and
- Through the proposed Cycling Committee (see section 4.3.1), Grey County can encourage member municipalities to engage in Bike Month Activities and can help to promote the activities that are planned.

In addition to coordinating a County-Wide Bike Month, Grey County can also assist its member municipalities by developing resources for distribution and pooling resources to ensure that campaigns and announcements are of a high quality and consistent / recognizable across the County. Through the proposed Cycling Committee, a Communications Task Force can be formed to:

- Find existing resources that have been produced by other municipalities or stakeholders that can be adapted for Grey County;
- Identify gaps in the existing promotions that can be filled by new County promotions; and
- Craft annual plans for messaging and communications about cycling in Grey County.

Examples of topics that could be highlighted within the communications strategy include:

- The benefits of cycling and active transportation to the community as a whole;
- The 1 metre Safe Passing Law;
- Safe group riding practices;
- Legal requirements for lights and reflectors on bikes; and
- Messaging about sharing the road and respecting all road users.

Figure 30 illustrates an example of a public resource and campaign launched by Share the Road Coalition in 2018 that is intended to be used as a communications piece to promote and encourage cycling in Ontario.

A Communications Strategy should utilize as many avenues of communications as possible, including, but not limited to:

- Social Media (Facebook, Twitter, Instagram etc.);
- Videos to be shared on screens within Grey County (such as, in Public Health offices or Recreation Centres);
- Radio ads;
- Newspaper ads; and
- Transit vehicle and shelter ads.

Table 13 outlines a list of relevant bicycle campaigns based in North America. These campaigns can be duplicated and shared to minimize the budgetary impact of creating new content.

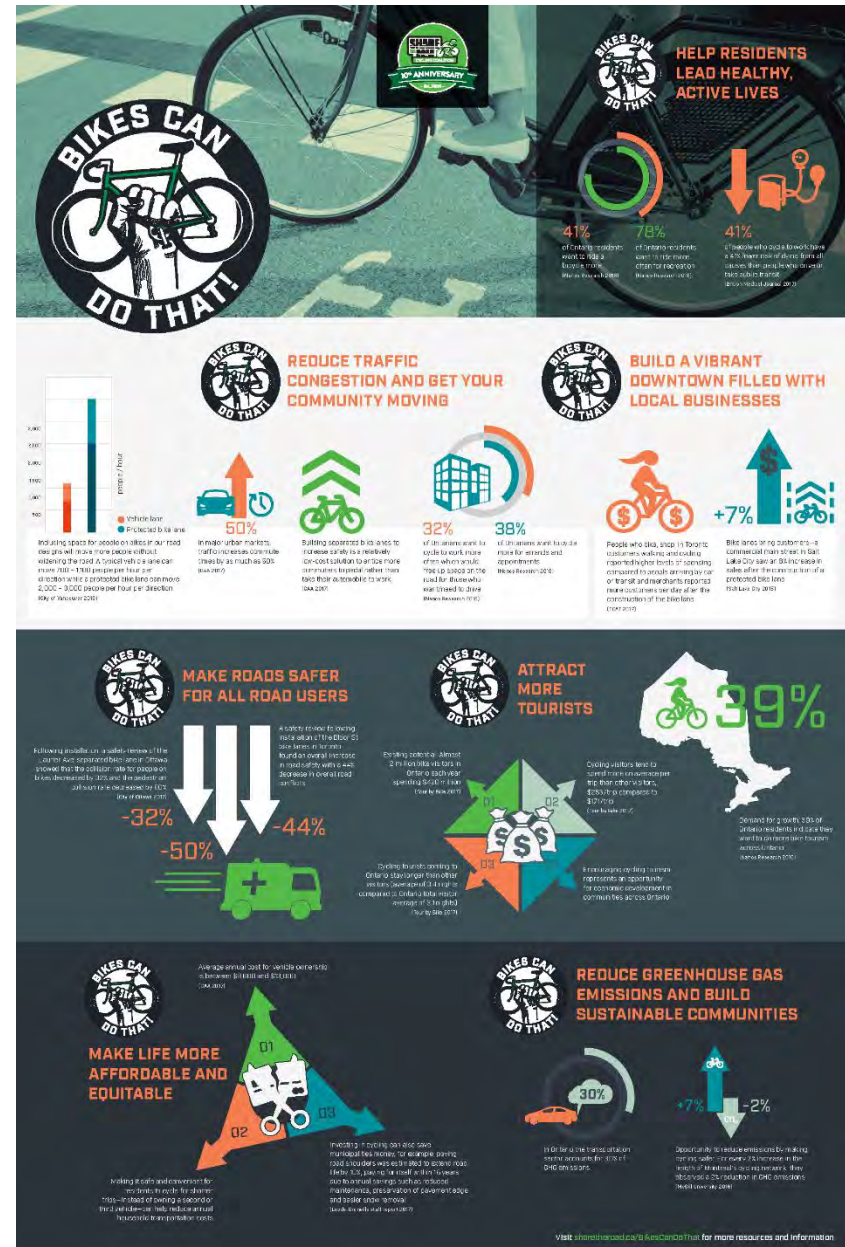


Figure 30 - Share the Road Coalition #BikesCanDoThat Campaign [here](#)

Table 13 - Examples of Bike Campaigns in North America

Campaign Name	Details
It Moves Us All (Share the Road and CAA) here	Humanizing people on bikes - encouraging a general “Share the Road” message.
Give Space, Lighten Up (Share the Road) here	Informing people driving of 1m safe passing law, encouraging people on bikes to comply with lights on bikes requirements.
Stay Safe Stay Back (Share the Road) here	Highlighting dangers of blind spots as it relates to large vehicles, especially for people on bikes.
You Know Me I Ride a Bike (Fort Collins, Colorado) here	Humanizing people on bikes - putting a local face to people cycling.
A Metre Matters (Peterborough County) here	Spreading awareness of the 1m safe passing law.
Thumbs Up Waterloo Region (Waterloo Region) here	Encouraging safe road use among all road users, including more eye contact, friendlier interactions.
Simcoe County Videos here	Group cycling messages and information about the 1m safe passing law.
City of Edmonton Cycling Videos here	Use of new infrastructure types, including bike lanes, sharrows, bike boxes and more.
Winter Wheels (City of Peterborough) here	Individual marketing program aimed at providing people with the skills and tools to ride through winter.
Safe Cycling Thunder Bay’s Cycling Videos here	A wide variety of information, including what bike lanes are, how they work and what expectations are.

All of the above suggestions can help to provide residents with the opportunity to rethink their transportation habits and trigger behaviour change. To accelerate these programs even further, the County could consider the hiring of a County-Wide Active Transportation Coordinator³, who would take the lead on delivering programs, creating tools, applying for grants and liaising with local Active Transportation representatives as the projects outlined in this Plan are implemented. This staff person would serve as the key point of contact for all elements of the Cycling and Trails portfolio at the County and would help to ensure broader coordination between member municipalities, the County and external stakeholders.

Table 14 outlines the suggested actions as well as supportive elements and best practices to enhance Everyday Cycling in Grey County.

Table 14 - Suggested Actions for Everyday Cycling Support

Suggested Action	Elements for success	Best Practice
1. Active School Travel Programs	<ul style="list-style-type: none"> – Begin School Travel Planning Process⁴ with local schools to identify opportunities for active travel and potential barriers. 	<ul style="list-style-type: none"> – Hire Regional School Travel Planning Coordinator in conjunction with Grey Bruce Health Unit to deliver programs.
2. Walking School Buses	<ul style="list-style-type: none"> – Opportunities for parents and other stakeholders to engage in active school travel promotions in their local areas. – Regular routes at for County’s most walkable schools. 	<ul style="list-style-type: none"> – Local walk leaders hired for each route - similar to hiring Crossing Guards.
3. Bike Rodeos	<ul style="list-style-type: none"> – Provide opportunities to students to learn safe riding practices. – Follow CAN-Bike Level 2 Curriculum for Bike Rodeos⁵. 	<ul style="list-style-type: none"> – Bring “Cycling Into the Future” program into Grey County to help teach students how to ride safely, legally and on-road.

³ This would mirror an effort undertaken in Essex County, where the County-Wide Active Transportation Strategy (CWATS) is overseen by an Active Transportation Coordinator.

⁴ For information about how to undertake School Travel Planning, find the Ontario Active School Travel Toolkit here:

<https://ontarioactiveschooltravel.ca/wp-content/uploads/2018/05/Guide-for-Regional-Stakeholders-STP-Toolkit-May-2018-En-1.pdf>

⁵ <http://canbikecanada.ca/wp-content/uploads/2019/05/Level-2-Rodeo-Basic-Skills-Website.pdf>

Suggested Action	Elements for success	Best Practice
4. Bike Month	<ul style="list-style-type: none"> - Create Bike Month Website with events Calendar and a consistent brand. - Print and distribute Bike Month calendars and flyers with local event listings. - Provide tools to member municipalities to host events. - Establish signature events throughout Grey County during Bike Month. 	<ul style="list-style-type: none"> - Through the hiring of a County-Wide Active Transportation Coordinator, assist member municipalities in planning and delivering events.
5. Cycling Communications Strategy	<ul style="list-style-type: none"> - Coordinate messaging annually, leveraging existing campaigns to reduce media creation budget. 	<ul style="list-style-type: none"> - Coordinate with partners to create “Made in Grey” campaigns to address specific messages as they arise.
6. Active Transportation Coordinator	<ul style="list-style-type: none"> - Contract position during summer months to help connect County-wide actions to local priorities. - Funding to deliver special events and connect with local stakeholders. 	<ul style="list-style-type: none"> - Full-time position to provide ongoing support and planning for implementation of Cycling and Trails Plan, and to facilitate resource sharing between County and member municipalities.

Overall, Grey County’s Implementation of this Cycling and Trails Plan will help to bolster both tourism and usage of bikes and trails infrastructure within communities. And while the capital investments outlined in this plan are undoubtedly foundational to creating a culture of activity in Grey County, without programmatic support for these investments, they won’t reach their full potential. The County is well situated to get more residents and visitors alike riding, hiking and experiencing Grey County’s roads and trails, but a specific plan to promote and develop the culture that surrounds those physical infrastructure improvements will go a long way towards creating ongoing support for these projects, and an environment where increased investments in active transportation infrastructure are expected by the community. It is recommended that the County build upon existing support and recommendations contained in Council-approved planning documents such as the Recreational Trails Master Plan, and continue to foster existing partnerships to support a culture of active living and enhanced recreation throughout the County and its member municipalities.

4.4 PARTNERSHIPS

Implementation of the County's Cycling and Trails Master Plan will require on-going coordination and collaboration between County staff and its partners. Relationships with existing partners should continue to be enhanced while new partnerships should be explored and fostered. To support new and existing partnerships, it is also important to establish a clear understanding of expected responsibilities and who will do what. The following table outlines suggested partners that are anticipated to have a role in implementing the various components of the County's Cycling and Trails Master Plan.

Table 15 - Potential Partners and Roles

Primary partners	Secondary partners
<ul style="list-style-type: none"> - County staff from various departments including: <ul style="list-style-type: none"> • Corporate Services (including the Information Technology department) • Economic Development, Tourism and Culture • Planning and Development • Transportation Services - Member municipalities <ul style="list-style-type: none"> • City of Owen Sound • Municipality of Grey Highlands • Municipality of Meaford • Municipality of West Grey • Town of Blue Mountains • Town of Hanover • Township of Chatsworth • Township of Georgian Bluffs • Township of Southgate - Conservation Authorities - Grey County Cycling Committee and Grey County Off-Road Trails Committee (refer to section 4.3.1 for details) 	<ul style="list-style-type: none"> - Committees of County Council including: <ul style="list-style-type: none"> • Grey County Joint Accessibility Advisory Committee • Economic Development and Planning Advisory Committee • Tourism Advisory Committee - Grey Bruce Health Unit - Regional Tourism Organization (RTO) 7: Bruce Grey Simcoe - Province of Ontario - School boards - Ontario Provincial Police - Local businesses and resorts - Local clubs and organizations - Advocacy groups - Residents
How can they help?	
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 plan including on-road cycling routes, multi-use facilities and other supportive infrastructure.	Secondary partners typically support primary partners related to the implementation of routes / facilities and supportive infrastructure. Secondary partners typically have a direct role in the planning and implementation of "soft" elements of the plan including outreach programs and promotional initiatives.

4.5 FUNDING OPTIONS

The County's Cycling and Trails Master Plan is estimated to cost approximately \$3.5 million over the next 10 years and it is expected that a majority of these costs can be supported by integrating cycling and trail infrastructure with planned capital projects. In addition to the County's capital plan, it is important that the County pursue external funding sources from other levels of government and explore partnerships with agencies and organizations to fund components of the master plan that are currently not captured in the capital plan. This section outlines potential funding options that the County, its member municipalities and partners could explore to support implementation of the various components in the master plan including the proposed infrastructure and programs.

capital projects

The estimated cost to implement the proposed cycling and trails network is \$3.5 million, of which \$3 million is directly tied to the County's current capital plan for infrastructure projects up to the year 2029. A majority of the network that is proposed for implementation in the short term and tied to the County's current capital plan includes paved shoulders followed by signed routes.

As part of the County's annual budget review process, it is recommended that County staff continue to identify opportunities to coordinate large-scale capital projects such as road reconstruction / rehabilitation to achieve economies of scale and build the costs for cycling and trail facilities into those budgets. An annual review to assess how to best integrate cycling and trail projects as part of other capital infrastructure projects can help advance the implementation of routes that otherwise might not be feasible.

provincial and federal grants

The estimated cost to implement the County's cycling and trails network can be significantly lowered by exploring available funding programs through the provincial and federal governments. **Table 16** outlines a diverse range of funding programs that the County could investigate to secure funding and investments for cycling and trails infrastructure, and ultimately implement the routes / facilities identified in this plan. The funding programs identified in **Table 16** were available at the time the County's Cycling and Trails Master Plan was prepared, however, they are subject to change over time. It is recommended that these funding programs be monitored regularly to ensure they reflect available resources at the time of implementation.

Table 16 - External Funding Opportunities

Funding opportunities	Additional details
Ontario Cycling Strategy (#CycleON)	<p>Ontario's Cycling Strategy (#CycleON) is the province's plan to encourage the growth of cycling and improve the safety of people who bike in Ontario. The strategy is supported by multi-year action plans that are developed in consultation with stakeholders including municipalities (regional and local) and partnering ministries.</p> <p>Funding for CycleON is granted for municipal projects that help achieve one of the five strategic directions, including improving cycling infrastructure and increasing cycle tourism opportunities. For additional details regarding the #CycleON Strategy refer to: http://www.mto.gov.on.ca/english/publications/ontario-cycling-strategy.shtml</p>
Investing in Canada Infrastructure Program	<p>In March 2019, a \$30 billion infrastructure funding program was launched to encompass combined federal, provincial, and local investments in communities across the province over the next 10 years. Ontario's share per project will be up to 33%, or \$10.2 billion spread across four streams: rural and northern; public transit; green stream; and community, culture and recreation.</p> <p>For additional details on the Investing in Canada Infrastructure Program, and specifically the Community, Culture and Recreation stream which can provide funding options for components of the County's Cycling and Trails Master Plan, refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/PRDR019953</p>
Investing in Canada Infrastructure Program: COVID-19 Resilience Stream	<p>In August 2020, the federal government released a new temporary COVID-19 Resilience stream, with over \$3 billion in funding. Under this stream, projects will be eligible for a significant federal cost share: up to 80% for provinces, municipalities and not-for-profit organizations in provinces (80 / 20 split).</p> <p>This stream has been created to provide provinces / territories and its municipalities with funding for quick-start, short-term projects that are to be completed and implemented by the end of 2021. Eligible projects include active transportation infrastructure such as parks, trails, foot bridges, bike lanes and multi-use paths.</p> <p>For additional details regarding the Investing in Canada Infrastructure Program: COVID-19 Resilience Stream refer to: https://www.infrastructure.gc.ca/plan/covid-19-resilience-eng.html</p>

Funding opportunities	Additional details
Canada Healthy Communities Initiative	<p>In August 2020, the federal government launched the Canada Healthy Communities Initiative with up to \$31 million in existing federal funding to support communities to deploy new ways to adapt spaces and services to respond to the needs arising from COVID-19 over the next two years. The initiative will support projects under three main themes: creating safe and vibrant public space; improving mobility options; and digital solutions.</p> <p>For additional details regarding Canada Healthy Communities Initiative refer to: https://www.infrastructure.gc.ca/chci-iccs/index-eng.html</p>
Tourism Development Fund	<p>The Tourism Development Fund provides non-capital, project-based funding to projects that support three key streams: tourism investment; tourism product development; and industry capacity building. Projects that are submitted for application are assessed on their ability to: increase in tourist activity; increase private sector tourism investment; increase the number jobs created from the project; have a strong economic impact for Ontario; and retain legacy opportunities including enhancement of existing infrastructure or new construction.</p> <p>For additional details regarding the Tourism Development fund refer to: http://www.grants.gov.on.ca/GrantsPortal/en/OntarioGrants/GrantOpportunities/OSAPQA005130</p>
Gas Tax Funds	<p>The Gas Tax Fund is a permanent source of revenue collected from fuel tax, from which a portion is provided to provinces and territories to support local infrastructure projects within 17 different categories such as recreation, tourism, sport, culture and local roads / bridges. Municipalities can pool, bank and borrow against this funding. The Association of Ontario Municipalities administers funds to all municipalities in Ontario except for the City of Toronto.</p> <p>Ontario's municipalities invested \$614 million from the federal Gas Tax Fund in 2018. The 2019-2020 federal Gas Tax Fund allocation for Grey County was \$2.8 million which does not include funding that the County's member municipalities were allocated.</p> <p>For additional information on the federal Gas Tax Fund, refer to: https://www.infrastructure.gc.ca/plan/gtf-fte-eng.html</p>

Funding opportunities	Additional details
Federation of Canadian Municipalities Green Municipal Fund	<p>The Federation of Canadian Municipalities Green Municipal Fund provides annual funding to municipalities across Ontario for eligible projects that help to reduce greenhouse gas emissions and support the nation's climate change goals. The Green Municipal Fund has different funding streams that can be applied to plans and studies, pilot projects, and capital projects. Examples where the Green Municipal Fund has been applied to cycling and active transportation projects in Canada include construction of the longest bike path in Cape Breton, Nova Scotia and a road revitalization study for the City of Grande Prairie, Alberta.</p> <p>For additional information on the Green Municipal Fund, refer to: https://fcm.ca/home/programs/green-municipal-fund.htm</p>
Federal and Provincial Infrastructure / Stimulus Programs	<p>Through Infrastructure Canada, the Investing in Canada plan outlines the federal government's comprehensive, long-term plan for infrastructure improvements. To support infrastructure improvement across Canada, the plan outlines five priority areas: public transit; green initiatives; social initiatives; trade and transportation; and rural and northern communities. Investment in cycling, trail and active transportation infrastructure is supported through the various priority areas in the plan. Over the 12 years of the plan, starting in 2016, it is anticipated that the federal government will invest over \$180 billion in infrastructure projects.</p> <p>For additional information on the Investing in Canada plan and other federal infrastructure / stimulus programs, refer to: https://www.canada.ca/en/office-infrastructure.html</p>
Ontario Trillium Foundation	<p>The Ontario Trillium Foundation is an agency of the Government of Ontario, and one of Canada's leading granting foundations. Between 2018 and 2019, the Ontario Trillium provided awarded \$108 million to 629 projects. Funding is allocated to projects that help each one or more of the foundation's six priority areas: active people; connected people; green people; inspired people; promising young people; and prosperous people. Projects related to cycling, trails and active transportation can be supported through the 'active people' priority.</p> <p>For details regarding potential funding alternatives refer to: https://otf.ca/</p>

Funding opportunities	Additional details
Regional Tourism Organization (RTO) 7: Bruce Grey Simcoe	<p>RT07 receives a partnership allocation from the Ministry of Tourism, Culture and Sport as part of an annual funding program to encourage partnerships, strategic coordination and leverage of regional resources. The partnership allocations are not grants, but matching fund projects managed by the various regional tourism organizations and conducted jointly with partners which could include private tourism businesses, marketing organizations, tourism organizations, municipalities and tourism associations / interest groups.</p> <p>RT07 offers partnership funding for different priority areas, including signage. Funds are available to conduct a signage plan, to fabricate signs, and install tourism wayfinding signs and cycling signs such as the Great Lakes Waterfront Trust signage.</p> <p>For additional information on the RT07 partnership program and available funding, refer to: https://rto7.ca/Public/Programs/Partnership-Program</p>

partnerships

Existing partnerships and new partnerships should continue to be explored to help contribute to the funding of potential cycling and trail programs or infrastructure. Potential partnerships have been identified in **Table 15** (refer to section 4.4) and should be considered as the County's Cycling and Trails Master Plan is implemented.

development charges

Growth-related infrastructure projects including cycling, trails and active transportation initiatives can be paid for by development charges. For example, the County's By-Law 4950-16 (Establish Development Charges General Services) outlines several designated services that are eligible for development charges, including the construction of new trails. Consideration should be given to clearly outlining funds that could be collected and used towards infrastructure improvements associated with new development, as part of the County's next Development Charge Background Study. It is recommended that the County continue to explore opportunities to construct the cycling and trails network as development occurs in the future.

external funding sources

There are a number of private sectors and services clubs that can be active in the County and its communities, and wish to promote healthy, multi-modal lifestyles. Examples of external funding sources can include:

- **Service Clubs:** Lions, Rotary and Optimist clubs who often assist with highly visible projects at the community level and can have a role in the funding of infrastructure and programs.
- **Corporate Environmental Funds:** Many corporations offer funding for initiatives that have a positive impact on the community. Examples of existing corporate environmental funds include:
 - Shell Canada's Investment Program [here](#)
 - TD's Friends of the Environment Foundation Grant [here](#)
- **Private Citizen Donation / Bequeaths:** Funding can come from citizen donations which could include tax receipts for donors where appropriate.
- **Donations to Agencies and Local Organizations:** Funding can be made to local organizations and agencies to support implementation of infrastructure and initiatives. For example, the Bruce Trail clubs have received donations which support / fund projects related to wilderness trails and lands.



4.6 MANAGING IMPLEMENTATION

Implementation of the Cycling and Trails Master Plan will require tools and strategies that can be used by the County and its partners to support future decision-making, streamline processes and help ensure communication is clear and consistent. The following sections outlines different types of tools and strategies have been identified for the County to help support implementation of the Cycling and Trails Master Plan. The information in these sections is not meant to be prescriptive; it is intended to help manage future implementation of the plan.

4.6.1 OPERATIONS AND ASSET MANAGEMENT

Maintenance is an important aspect to support high-quality routes and promote usage of the cycling and trails network for pedestrians, cyclists and other non-motorized users. The maintenance of routes can help leverage capital investments, mitigate a user's exposure to risk, minimize potential conflict between users, mitigate liability exposure for the County and member municipalities, and ultimately maximize the lifespan of the facility. Maintenance practices for all seasons can include:



road
sweeping



surface
repairs



pavement markings
and signage



vegetation
management



snow clearance and
ice control



drainage
improvements

As the County's cycling and trails network expands, consideration should be given to adapting maintenance practices and the level of service to address new facilities and standards such as the Province's Minimum Maintenance Standards for Municipal Highways (O.Reg. 239/02). The Province's Minimum Maintenance Standards outline various elements of road maintenance and operations including the frequency of road inspections, weather monitoring, ice formation on roadways, snow accumulation and sidewalk trip ledges. These standards were updated in May 2018 and provide provisions for the maintenance of walking and cycling facilities including winter maintenance standards, patrol obligations, declarations of significant weather events and inspection standards.

It is recommended that the County continue to apply their maintenance standards and transportation service protocols consistent with the Province's Minimum Maintenance Standards. However, where deemed appropriate due to financial and resource limitations, the County could establish by-laws / protocols to provide specific provisions for the operation of facilities during winter months.

For example, By-Law 5036-18 was adopted by Grey County Council in November 2018 to authorize the annual closure of specific on-road cycling facilities from October 1 to April 15 (winter season). As such, signage has been installed on Grey Road 1 and Grey Road 19 that notifies cyclists “Bike Lane Closed for Winter Season”.

To support the County’s on-going maintenance and operation practices, consideration should also be given to asset management. Asset management can help to address growth, improvements and maintenance of the network, while achieving the County’s standards for level of service. Asset management also seeks the most cost-effective way to establish desired levels of service while optimizing existing resources. Components of asset management could include:

- Work with maintenance staff during the planning and design stages to ensure they have the equipment and resources available to maintain new routes.
- Maintain a GIS inventory to track infrastructure and other elements like pavement markings, signs, etc.
- Schedule routine inspection and maintenance activities to meet level of service standards.
- Develop an asset management plan to include capital and operating lifecycle costs based on service levels.
- Maintain a database of actual costs of facilities to help with budgeting for future projects.
- Set and adjust asset management plans and budgets as necessary to meet targets.

Table 17 outlines asset management assumptions and typical service life for various elements of a cycling and trails network.

Table 17 - Asset Management Assumptions for Cycling and Trail Infrastructure

Type	Useful life	Strategies
Asphalt pathway	25 years	<ul style="list-style-type: none"> - Minor repairs - Resurfacing - Rehabilitation - Full-depth replacement
Concrete pathway	50 years	<ul style="list-style-type: none"> - Minor repairs - Replace deteriorating segments - Full replacement
Bridge (trail or motor vehicle)	25 to 75 years	<ul style="list-style-type: none"> - Bridge repairs - Minor rehabilitation - Full replacement
Culvert	25 to 50 years	<ul style="list-style-type: none"> - Culvert repair - Minor rehabilitation - Full replacement
Painted line markings	1 year	<ul style="list-style-type: none"> - Refresh annually
Durable line marking and symbols	2 to 7 years	<ul style="list-style-type: none"> - Refresh annually or depending on wear
Signage	20 years	<ul style="list-style-type: none"> - Depends on type, weather conditions, amount of wear

4.6.2 IMPLEMENTATION PROCESS

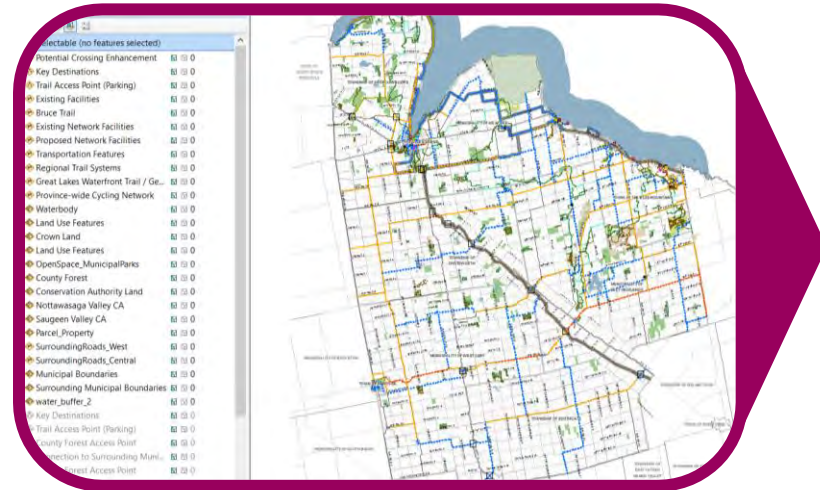
Consistent with provincial best practices, a multi-step process can be applied to identify, review, design, implement, and monitor new facilities. This five-step process (based on Ontario Traffic Manual Book 18) outlines the steps that occur once staff and Council have decided to implement a specific corridor identified as part of the proposed network. The process is outlined in **Table 18**.

Table 18 - Five Step Implementation Process

Steps	What does this mean for the county?
1. Preliminary review When any project moves to the planning stage, or when a new opportunity arises, a preliminary review should be completed to consider responsibility, timeline, cost-effectiveness, and feasibility.	Identify routes to be implemented as part of the cycling and trails network.
2. Feasibility assessment A feasibility assessment should consider route selection criteria, design principles, characteristics, and context-specific considerations. A preliminary functional design should be prepared, potentially at the same time as a municipal class environmental assessment.	Evaluate identified cycling and trail routes. Conduct assessment based on engineering best practice processes.
3. Design, tender and construction A detailed design should be completed based on best practices and guidelines and standards. The phasing should be consistent with the plan. Construction is completed during this stage, and the County should explore partnerships for cost-sharing and update the geospatial / map database to reflect the status of the project.	Design, tender, and construct the selected cycling or trail route that has been assessed from a feasibility perspective.
4. Monitoring Following construction, the cycling / trail facilities should be monitored to ensure functionality. The facilities should be properly maintained and upgraded when necessary.	Monitor the constructed facility to determine whether it is properly functioning, and maintenance practices are appropriate for the facility type.
5. Official plan updates When appropriate, official plans and other policies should be updated to reflect the status of the cycling and trails network.	Update planning documents to ensure that they are reflective of the latest legislation from governments.

4.6.3 NETWORK MANAGEMENT TOOLS

Managing the County's Cycling and Trails Master Plan 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 County staff and its partners. The proposed network management tools are summarized below.



geographic information systems (GIS)

County staff are encouraged to use the GIS database to effectively manage County assets and communicate project outcomes / status. The database contains spatially referenced data used to develop the County's preferred cycling and trails network including existing routes, proposed routes, facility types, phasing, regional trail routes / systems, transportation features, land use features and other community destinations. The database was created using information provided by the County, its local municipalities, Conservation Authorities, BTC, the province and publicly available sources.

excel-based database

The excel spreadsheet is meant to be used as a tool for those who do not have access to GIS software. The spreadsheet is a replicate of the GIS database and should be updated on an on-going basis with the GIS database so that the data is consistent and accurate. This database can also be integrated with the County's asset management tool to track status of cycling and trails projects.

A	B	C	D	E	F	G
ID	Road Name / Route Description	From	To	Lane Count	Posted Speed	Length (KM)
37	Grey Road 109	Grey Road 3	Highway 6	2	80	1.916259678 C
39	Grey Road 6	Road 71	Highway 89	2	80	1.270567028 C
51	Grey Road 109	Southgate Road 12	Highway 6	2	80	6.970090858 C
156/279	Sideroad WGR, Concession 2 SDR, Baseline	Grey Road 29	Concession 2 WGR	2	80	12.798717392 W
236	Main Street West / East	14th Street	Highway 10	2	50	2.405924105 C
258	Grey Road 9	Southgate Sideroad 39	Southgate Sideroad 71	2	80	28.01915111 C
295	Grey Road 9	County Road 124	Melancthon Osprey Townline	2	80	5.704913792 C
302	Highway 6	Southgate Road 12	Grey Road 9	2	80	0.23342819 P
351	Koncardine Street North, George Street	Existing off-road trail	Lambton Street East	2	50	0.431861144 W
353	George Street West	Bruce Street North	Garafusa Street South	2	50	0.378418245 W
634	Grey Road 9	Welona Street	Highway 6	2	80	11.55534956 C
677	Grey Road 14	Southgate Sideroad 7	Grey Road 9	2	80	8.11374056 C
677	Grey Road 14	Grey Road 4	Southgate Sideroad 7	2	80	5.697063562 C
679	Grey Road 14	Grey Road 9	Southgate Road 08	2	80	8.193396319 C
679	Grey Road 14	Southgate Sideroad 11	Highway 89	2	80	8.141632231 C
688	Grey Road 4	Beit Street	Harold Best Parkway	2	5000	2.481918907 C
699	Grey Road 4	Artemesia Glenelg Townline	River Street	2	5000	0.798302237 C
705	Grey Road 4	Grey Road 23	Artemesia Glenelg Townline	2	80	4.980980658 C
709	Grey Road 4	Camp Oliver Road	Grey Road 23	2	80	4.022456995 C
711	Grey Road 23	Stone Hill Road	Grey Road 9	2	80	7.374901231 C
711	Grey Road 23	Grey Road 4	Stone Hill Road	2	80	3.602564125 C
723	Grey Road 109	Grey Road 9	Southgate Road 14	2	80	1.509894685 C
724	Grey Road 109	Southgate Road 14	Southgate Road 14	2	80	0.274878267 C
725	Grey Road 109	Southgate Road 14	Southgate Road 12	2	5000	1.844067436 C
734	Southgate Road 12	Highway 6	Grey Road 109	2	80	2.863008686 C
758	Grey Road 4	George Street East	Camp Oliver Road	2	5000	5.596201381 C
777	Bruce Street North, Lambton Street	Chesler Street West / East	George Street	2	50	1.656023096 C
778	Concession 2 WGR, Robinson Road	Wetlock Road	Grey Road 4	2	80	10.74335245 W
779	Grey Road 4	Concession 2 WGR	Saugen River in Durham	2	80	1.256256628 C
783	Douglas Street	Concession 2 WGR	Durham Trail	2	50	2.182664268 W
784	Grey Road 4	Manover boundary	Concession 2 WGR	2	80	12.05185283 C
784	Grey Road 4	14th Avenue	Manover / West Grey boundary	2	80	1.031726175 C
790	Grey Road 9	Approximately 197 metres east of Porter St	Grey Road 3	2	80	4.701203666 C
839	Grey Road 3	Ox Bridge Road North	Grey Road 4	2	50	0.72852777 C
894	10th Avenue	5th Street	5th Street	2	50	1.22312222 C
896	3rd Street, 5th Street, 11 Avenue	10th Avenue	12th Avenue	2	50	0.47 C

4.6.4 MONITORING AND EVALUATION

A monitoring plan can be used to assess implementation of the master plan recommendations and how successful they have been in achieving the overall vision for cycling and trails in Grey County. Establishing measures to assess progress can help the County prioritize future projects, rationalize investments and appropriately allocate resources. Research indicates that meaningful performance measures can help to:

- Demonstrate the value of cycling and trail projects to citizens and elected officials;
- Track the success of a cycling and / or trail 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 and trails;
- Provide information to engage a broad set of stakeholders; and
- Capture the value of new and innovative datasets and data collection methods for cycling and trails.

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 plan.

Table 19 outlines performance measures that the County could consider using to document results of implementing the proposed cycling and trails network. The proposed performance measures are based on best practices and key indicators used by other municipalities in Ontario. County 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 and Trails Master Plan. County staff are also encouraged to work with its partners and other agencies to collect and share data that could provide insight on performance metrics and inform development on an annual report. An annual report could be used to demonstrate the meaningful improvements in cycling and trails, as well as other associated improvements and to publicly demonstrate return on investment. Through the life-cycle of the plan, the performance measures should be re-evaluated on a regular basis, and the data used to inform future improvements.

Table 19 - Suggested Performance Measures for the County's Cycling and Trails Master Plan
Source - Adapted from Fehr and Peers Active Transportation Performance Measures (2015)

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

4.7 NEXT STEPS

The Cycling and Trails Master Plan is the County's blueprint to improve cycling and trail infrastructure, programs and policies over the next 10+ years. It has been developed to respond to the current demands, future trends and growing popularity for cycling and trails in Grey County. This plan is made for Grey County, by Grey County and reflects our values, assets and aspirations for healthy, active lifestyles.

Developing this plan was a collaborative effort between the County, its member municipalities, Grey Bruce Health Unit, key stakeholder groups and residents. As we move forward to implement components of the plan, we will continue to engage in a collaborative manner to achieve the vision and objectives for cycling and trails in Grey County.

This plan demonstrates our commitment to continue to enhance opportunities for recreational, tourism and active living in Grey County. The recommendations contained in this plan will help to enhance our long-standing history and culture of recreation and tourism and make the County a premier destination for cycling and trails in Ontario.

CHAPTER 4 RECOMMENDATIONS

Recommendation	Plan Objectives Achieved									
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies	
13. The phasing plan illustrated in Maps 3a and 3b should be adopted by County Council and staff as a guide for the implementation of the cycling and trails network and to inform annual decision-making related to capital and operating budgets.	✓					✓			✓	
14. County staff should explore opportunities to advance long-term projects into the short-term as part of planned capital roadway / infrastructure projects, should any opportunities arise in the future.	✓								✓	
15. Appendix D should be used as a tool by County staff to track future implementation, costing and budgeting of the proposed cycling and trails network. As needed, the costing should be updated to reflect more accurate estimates based on inflation and other external factors.									✓	
16. County staff should refer to the proposed cost estimates (section 4.2) to identify opportunities to build the costs for cycling and / or trail facilities into the budgets of large-scale capital projects, where possible.							✓			
17. It is recommended that County staff report back to Council on an annual basis to provide an update on the implementation of new infrastructure and to provide Council with an outlook for anticipated cycling and trail projects to be completed in the following year.							✓			
18. It is recommended that the County establish two committees: Cycling Committee and Off-Road Trails Committee. Each committee could include representation from all member municipalities, partners and stakeholder groups to help facilitate a coordinated and collaborative effort for the on-going support of the Cycling and Trails Master Plan.								✓	✓	

CHAPTER 4 RECOMMENDATIONS (CONT'D)

Recommendation	Plan Objectives Achieved									
	Identify a continuous and connected network	Improve accessiblity and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies	
19. County staff should work with its partners (including but not limited to the Bruce Trail Conservancy) to increase user education of trail etiquette and permitted trail uses on the various trails located within Grey County including off-road multi-use trails (where cycling is permitted) and off-road single-track, wilderness trails.					✓			✓	✓	
20. County staff should review and consider undertaking the action items identified in Table 11, Table 12 and Table 14 to support the delivery of programs and initiatives in Grey County.		✓	✓	✓	✓	✓	✓	✓	✓	
21. The County should reach out to partners identified in Table 15 and continue to work together to coordinate the implementation of the Cycling and Trails Master Plan. The Cycling Committee and Off-Road Trails Committee (see recommendation #18) can also serve as champions to facilitate coordination and efforts between the County and its partners.									✓	
22. County staff should continue to explore external funding sources and partnerships to help fund implementation of the Cycling and Trails Master Plan.									✓	
23. County staff should review and consider utilizing the tools and strategies identified in sections 4.6.2, 4.6.3 and 4.6.4 to support on-going implementation, management and monitoring of the proposed infrastructure and programs contained in the Cycling and Trails Master Plan.									✓	



CYCLING AND TRAILS MASTER PLAN SUMMARY OF ALL RECOMMENDATIONS

Recommendation	Plan Objectives Achieved									
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies	
1. The route selection criteria identified in 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 cycling and trails network.									✓	
2. The proposed cycling and trails network illustrated on Maps 2a and 2b should be adopted by County Council to guide future design and implementation.	✓	✓	✓	✓	✓	✓	✓			
3. It is recommended that the County continue to work with its partners to identify future opportunities to improve connections to off-road single-track, wilderness trails (e.g. links to / from wilderness trail systems such as Kolapore Wilderness Trails, Bruce Trail, etc. and connections between wilderness trails and community destinations / services.)	✓	✓	✓	✓			✓			
4. Incorporate the cycling and trails network as a Schedule in the County’s Official Plan when next updated.								✓	✓	
5. The updated OTM Book 18 three-step facility selection process should be referred to by County staff and its partners as the network is implemented over time to review and confirm facility types before moving into the design and construction stages.									✓	
6. The proposed cycling and trails network should be flexible enough to provide for change in routing and/or facility types based on new information, Council policy and data as it becomes available. There may be opportunities for additional or alternate connections to be made in the future. These connections should be considered, and the mapping and database updated if a change is warranted.	✓								✓	

Recommendation	Plan Objectives Achieved								
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies
7. It is recommended that the County leverage future opportunities to upgrade existing partial paved shoulders, where possible / feasible, when the respective roads are next scheduled for reconstruction or resurfacing to fully paved shoulders and greater separation from motor vehicle traffic.			✓	✓	✓		✓		✓
8. It is recommended that County staff and its partners reference the guidelines and standards identified in section 3.1 when moving forward with the planning, design and implementation of cycling and trails infrastructure.									✓
9. It is recommended that consideration be given to the travel lane widths consistent with the Transportation Association of Canada Geometric Design Guide for Canadian Roads (see section 3.1.2) when roads identified on the County’s cycling and trails network, are next scheduled for resurfacing / reconstruction to implement paved shoulders (desired width of 1.5 metres) if and where possible.	✓	✓			✓				✓
10. The County should identify significant trail crossings and explore options for implementing crossings and structures that reflect the design of the trail to provide a greater sense of connectivity.		✓	✓	✓			✓		✓
11. County staff should develop a wayfinding strategy for the cycling and trails network. Building upon a wayfinding strategy, a pilot project can be implemented to test the functionality of the wayfinding system and get feedback from users (refer to section 3.1.4).							✓	✓	✓
12. The County should review and adopt the appropriate risk management and liability prevention strategies into day-to-day decision making related to cycling and trails planning, design and maintenance.									✓

Recommendation	Plan Objectives Achieved									
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies	
13. The phasing plan illustrated in Maps 3a and 3b should be adopted by County Council and staff as a guide for the implementation of the cycling and trails network and to inform annual decision-making related to capital and operating budgets.	✓					✓			✓	
14. County staff should explore opportunities to advance long-term projects into the short-term as part of planned capital roadway / infrastructure projects, should any opportunities arise in the future.	✓								✓	
15. Appendix D should be used as a tool by County staff to track future implementation, costing and budgeting of the proposed cycling and trails network. As needed, the costing should be updated to reflect more accurate estimates based on inflation and other external factors.									✓	
16. County staff should refer to the proposed cost estimates (section 4.2) to identify opportunities to build the costs for cycling and / or trail facilities into the budgets of large-scale capital projects, where possible.							✓			
17. It is recommended that County staff report back to Council on an annual basis to provide an update on the implementation of new infrastructure and to provide Council with an outlook for anticipated cycling and trail projects to be completed in the following year.							✓			
18. It is recommended that the County establish two committees: Cycling Committee and Off-Road Trails Committee. Each committee could include representation from all member municipalities, partners and stakeholder groups to help facilitate a coordinated and collaborative effort for the on-going support of the Cycling and Trails Master Plan.								✓	✓	

Recommendation	Plan Objectives Achieved								
	Identify a continuous and connected network	Improve accessibility and inclusivity for various users	Support recreation, commuter and touring trips	Connect to natural and cultural areas	Increase use of active modes	Support year round use	Support economic and tourism initiatives	Provide consistent and branded communications	Provide guiding tools and strategies
19. County staff should work with its partners (including but not limited to the Bruce Trail Conservancy) to increase user education of trail etiquette and permitted trail uses on the various trails located within Grey County include off-road multi-use trails (where cycling is permitted) and off-road single-track, wilderness trails.					✓			✓	✓
20. County staff should review and consider undertaking the action items identified in Table 11, Table 12 and Table 14 to support the delivery of programs and initiatives in Grey County.		✓	✓	✓	✓	✓	✓	✓	✓
21. The County should reach out to partners identified in Table 15 and continue to work together to coordinate the implementation of the Cycling and Trails Master Plan. The Cycling Committee and Off-Road Trails Committee (see recommendation #18) can also serve as champions to facilitate coordination and efforts between the County and its partners..									✓
22. County staff should continue to explore external funding sources and partnerships to help fund implementation of the Cycling and Trails Master Plan.									✓
23. County staff should review and consider utilizing the tools and strategies identified in sections 4.6.2, 4.6.3 and 4.6.4 to support on-going implementation, management and monitoring of the proposed infrastructure and programs contained in the Cycling and Trails Master Plan.									✓



PHOTO SOURCES

Page	Source
i, ii	https://www.visitgrey.ca/colouring-it/grey-county-above-whole-new-perspective
1	Grey County Marketing Strategy 2018
4	https://www.facebook.com/CountyOfGrey/photos/a.10150510411295987/10154189535415987/?type=3&theater
10	Photo of cyclists: Photo provided by Grey County
10	Photo of hikers: https://www.visitgrey.ca/business/sulphur-spring-conservation-area
10	Photo of road: WSP field work
10	Photo in Flesherton: WSP field work
13	Photo provided by Grey County
15	Photo of road construction: Photo provided by Grey County
15	Photo of data: Photo provided by Grey County
15	Photo of open data page: Screenshot from https://maps.grey.ca/pages/open-data
16	Photo of bike friendly business: Photo provided by Grey County
16	Photo of Jane's Walks: https://www.facebook.com/CountyOfGrey/photos/a.10150510411295987/10154189535415987/?type=3&theater
16	Photo of Ride Don't Hide: https://www.facebook.com/greycountytourism/photos/a.1152701181497821/1469109289857007/?type=3&theater
16	Photo of Women's Ride Day: https://www.visitgrey.ca/public-events/event/womens-ride-day
17	Photo of Growling Beaver Brevet provided by Grey County
17	Photo of Sea Otter Canada: https://seaottercanada.com/video-gallery/
17	Photo of Grey County Road Race; https://wetpixels.photoshelter.com/gallery-image/2016-Grey-County-Road-Race/G0000kKj2IMezjjM/I00005LCKbXshkLc/C0000cqggq2fqNSwQ
19	Photo of facility types from WSP field investigations
23	Photo provided by Grey County
30	Photo of first public information centre provided by Grey County
31	https://www.facebook.com/CountyOfGrey/photos/a.10150510411295987/10157297694665987/?type=3&theater
32	https://www.facebook.com/greycountytourism/photos/a.1152701181497821/1442957912472145/?type=3&theater
34	https://www.facebook.com/greycountytourism/photos/a.215334771901138/1207520489349223/?type=3&theater
35	Photo provided by Grey County
51	Photos (4) of County roads taken by WSP
52	Photo of signed route in the Town of Oakville, Ontario taken by WSP

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52	Photo of signed route in the Town of Penetanguishene, Ontario, taken from Google Street View
55	Photo provided by Grey County
57	Photo of signed route in the Town of Lincoln, Ontario taken by WSP
58	Photo of signed route with edgeline in York Region, Ontario taken by WSP
59	Photo of paved shoulder and buffered paved shoulder in the Town of Penetanguishene, Ontario taken by WSP
60	Photo of a bike lane in Essex County taken by WSP
61	Photo of an in-boulevard pathway in the City of Richmond Hill, Ontario taken by WSP
62	Photos (2) of off-road trails in the Town of Collingwood, Ontario taken by WSP
66	Photos of Grey Road 19 taken from Google Street View and Grey Road 17 taken by WSP
67	Photo of prefabricated pedestrian bridge in Guelph taken by WSP
67	Photo of boardwalk at Rondeau Provincial Park taken by WSP
68	Photo of cross ride in Caledon East at the Trans Canada Trail, taken by WSP
68	Photo of cross ride in Caledon East at the Trans Canada Trail, taken by WSP
69	Photos of wayfinding / signage examples, taken by WSP
69	Photos of wayfinding / signage examples, taken from the County's website and WSP
70	Photos of wayfinding / signage examples provided by the County and taken by WSP
72	Photos taken from the County's Tourism website https://www.visitgrey.ca
73	Photos of each loop route taken from the County's Tourism website: https://www.visitgrey.ca
76	Photo of cyclists provided by Grey County
76	Photo of mobility-assisted user: https://www.ontariotrails.on.ca/index.php?url=learn/trail-info/accessibility-a-guide-for-accessible-web-design
77	Photo of causal walker taken by WSP
77	Photo of wilderness hikers: http://caledonbrucetrail.ca/hiking/hikes/
77	Photos of joggers / runners taken from the County's Tourism website https://www.visitgrey.ca
78	Photo of snowmobile: https://www.visitgrey.ca/travel-tools/travel-stories/snowmobiling-101
78	Photo of equestrian: http://saageenconservation.com/ca_details.php?page=horsecamping
80	Photo of person on e-bike taken from WSP's Micro-mobility White Paper
85	Photo for partial paved shoulder taken by WSP
85	Photo for road surface taken by WSP
85	Photo for risk management and liability: https://www.grey.ca/sites/default/files/field/image/Road.jpg
88	Photo provided by Grey County
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93	Photos taken from the County's Tourism website https://www.visitgrey.ca
95	Photo provided by Grey County
117	Photo of road improvement: https://www.facebook.com/CountyOfGrey/photos/a.10150510411295987/10157398909845987/?type=3&theater
118	Photo for road sweeping: https://www.pickering.ca/en/living/resources/StreetSweeper.jpg
118	Photo for surface repairs: https://i.cbc.ca/1.1652719.1381473570!/httpImage/image.jpg_gen/derivatives/16x9_780/hi-istock-road-repair-852.jpg
118	Photo for pavement markings: https://suresealpavement.com/wp-content/uploads/2015/03/Line-Marking-5-min-300x225.jpg
118	Photo for vegetation management: https://www.americantrails.org/images/articleImage550/1-sub-07_YWP_3-copy.JPG
118	Photo for snow clearance: https://www.facebook.com/CountyOfGrey/photos/a.10150510411295987/10157753347295987/?type=3&theater
118	Photo for drainage improvements: https://nexus.prod.postmedia.digital/wp-content/uploads/2020/01/BR.0114-br-flooding-3.jpg
124	https://www.facebook.com/greycountytourism/photos/a.206267752807840/2132717463496183/?type=3&theater
127	https://www.facebook.com/greycountytourism/photos/a.215334771901138/2122166344551295/?type=3&theater
132	https://i2.wp.com/jimbyerstravel.com/wp-content/uploads/2016/09/Aerial-Beaver-Valley-visitgrey.ca_.jpg?resize=1600%2C1068

