



TOWN OF GEORGINA

Trails & Active Transportation (AT) Master Plan



Final Report
May 2014

Prepared By:



In Association with:





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TOWN OF GEORGINA

Trails & Active Transportation Master Plan



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1.0 INTRODUCTION

1.1 Purpose of the Plan

The development and implementation of trail and active transportation (AT) facilities can offer numerous aesthetic, recreational and utilitarian options for travelling to and from destinations in the Town of Georgina. The Town has committed to providing its permanent and seasonal residents as well as its visitors with a range of active transportation and active recreation alternatives. This Community-wide Trails and Active Transportation Master Plan represents a significant step forward towards meeting this commitment.

A system of integrated and connected on and off-road facilities can help define a community that is great to live, work and play in which supports improved community health, safety, economy, transportation and tourism. The Town of Georgina has many opportunities to develop an integrated, connected and continuous trail and active transportation system. Both the built environment and areas of natural significance provide ample space and opportunities for the development of community-wide linkages for a range of users of different ages and abilities.



The Town of Georgina has committed to developing a strategic long-term master plan geared at increasing levels of active transportation for recreational as well as utilitarian purposes to help increase community safety, encourage healthy lifestyles and improve the town's already existing tourism attractions. It builds upon active transportation and trail related plans which have already been developed by the Region of York, existing and already proposed Town trails, as well as key trail linkages such as the Lake to Lake Cycling Route and Walking Trail.

The Master Plan identifies a system of trails and active transportation routes and facilities that builds upon what is already on the ground as well as a set of supporting policies and recommendations. In order to facilitate the implementation of the master plan's network and recommendations a set of tools have been recommended for adoption by the Town to facilitate implementing the master plan.

An equally important part of the Plan is the promotion and use of trails and active transportation facilities. Promotion can include education, outreach and encouragement initiatives which are used to raise awareness of all the community benefits which can be realized from increased investment in soft and hard infrastructure.

By combining and integrating all of these elements into the master plan and into day to day community planning and design practices, the Town will help to initiate the cultural shift and change required to increase levels of walking, cycling, etc. Ultimately, it is the integration of these modes into day-to-day activities and recreation pursuits that will improve the livability and quality of life for all Georgina residents and visitors.

1.2 The Study Process

The study that led to the development of this Plan involved a series of iterative research, consultation and field confirmation steps.

The study was completed between June 2013 and December 2013. **Figure 1.1** illustrates the study process which was used to develop the Trails and Active Transportation Master Plan for the Town of Georgina.



INTRODUCTION

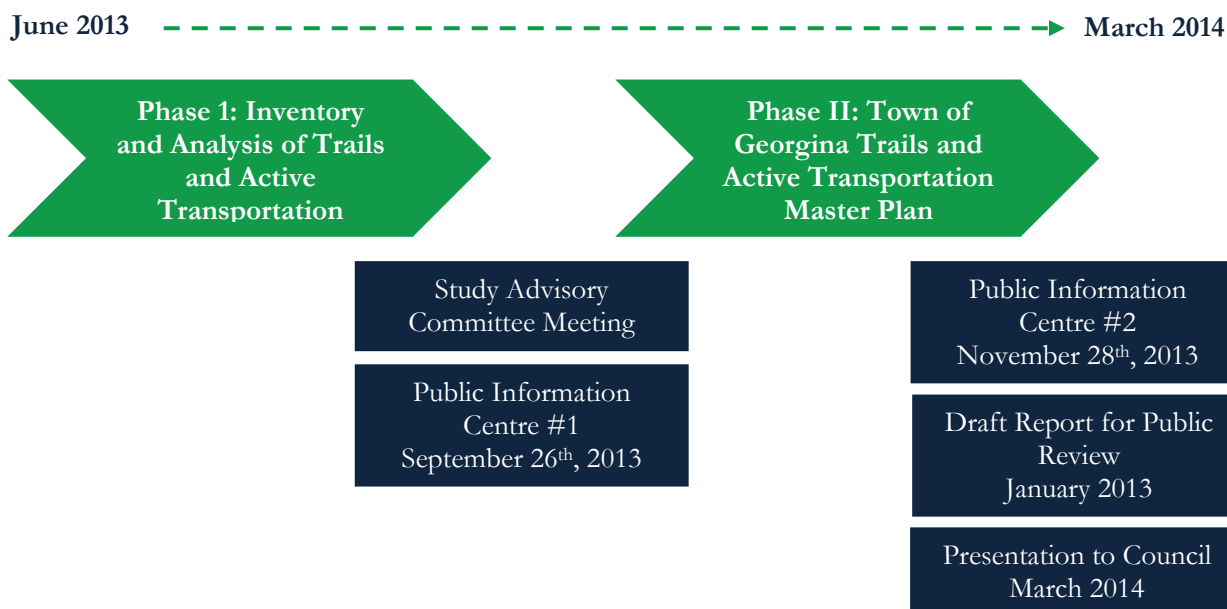


Figure 1.1 – Trails and Active Transportation Study Process

Details about the tasks undertaken in Phase I and II of the study can be found in **Table 1.1**.

Table 1.1 – Tasks Undertaken as part of the Study Process

Phase I Tasks	Phase II Tasks
<ul style="list-style-type: none">• Confirm Consultation Materials• Prepare Background information & Develop Study Vision & Objectives• Undertaken Feasibility Study of Existing Trail and AT Facilities (Initial Field Investigation) & Prepare Mapping• Develop Route Selection Criteria• Prepare Trail & AT Candidate Route Network	<ul style="list-style-type: none">• Confirm Candidate Routes & Define Route Hierarchy• Develop Draft Trails and AT Network• Prepare Trail and AT Design Guidelines and Standards• Develop Implementation Strategy• Prepare Public Engagement and Promotion Campaign• Prepare Master Plan Report, Policies and Partnership Opportunities• Finalize Master Plan Report


At the same time that the Trails and Active Transportation Master Plan was being developed by MMM Group, Monteith Brown Planning Consultants (MBPC) was undertaking a study to assess the need for additional Recreational Facilities.



Given the two studies were undertaken in parallel, a number of combined public consultation initiatives were undertaken (i.e. combined open houses were conducted and a combined on-line questionnaire). The consultation activities included in the Trails and Active Transportation Study were used to engage residents and stakeholders in the development of the Master Plan and were aimed at a range of users of different ages, abilities and interests.

Details regarding the public and stakeholder consultation activities undertaken as part of the development of the Trails and Active Transportation Master Plan are documented in **Appendix B**. The input which was gathered played a key role in informing the development of this master plan. Many of the key linkages and priority projects that have been identified were a result of input which was provided through a number of consultation initiatives (i.e. public open houses, comment forms and on-line questionnaire). In addition to those engagement techniques identified in **Figure 1.1** the following public and stakeholder consultation activities were also used to gather input over the course of the study:

- **Notice of Study Commencement** – a public notice to document the commencement of the two studies was prepared and published in the local SNAP newspaper and was also posted on the study webpage.
- **Public Outreach Campaign** – an ongoing initiative to promote the study throughout the Town using strategic materials including mobile display boards with key study information and indicating ways in which the public could get involved as well as a study promotional business card with a link to the online questionnaire and contact information for the study representatives.

 <p>We need YOUR input!</p> <p>Trails and Active Transportation Study</p> <p>Recreation Facility Needs Study</p> <p>Key resources for both studies:</p> <ul style="list-style-type: none">• Questionnaire: https://www.research.net/s/GeorginaStudies• Facebook: www.facebook.com/TownofGeorgina• Webpage: www.georgina.ca	<p>for more information about these studies please email or contact:</p> <p>Robin McDougall Director of Recreation & Culture, Town of Georgina T: 905-476-4301 ext. 2236; E: rmcdougall@georgina.ca</p> <table border="0"><tr><td>Trails and Active Transportation Study</td><td>Recreation Facility Needs Study</td></tr><tr><td>Dave McLaughlin Sr. Project Manager, MMM Group T: 905-882-7306 E: mclaughlind@mmm.ca</td><td>Steve Langlois Principal Planner, MBPC T: 519-686-1300 E: slanglois@mbpc.ca</td></tr></table>	Trails and Active Transportation Study	Recreation Facility Needs Study	Dave McLaughlin Sr. Project Manager, MMM Group T: 905-882-7306 E: mclaughlind@mmm.ca	Steve Langlois Principal Planner, MBPC T: 519-686-1300 E: slanglois@mbpc.ca
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- **Online Outreach & Promotion** -The Town developed a webpage on the Town website dedicated to the master plan<http://georgina.ca/trails-and-transport-study.aspx>. The webpage was hosted by the Town over the course of the study and included key information regarding public and stakeholder involvement including a link to the online questionnaire, dates, times and locations of public information centres and postings of key study deliverables such as master plan mapping, chapters for review and display boards from public events.
- **Online Questionnaire** – A web-based engagement tool was used to gather input from the public regarding their current trail and active transportation use and activity levels as well as recommendations and input regarding future needs and opportunities for program and infrastructure development Town-wide.

1.3 Study Objectives

Town of Georgina staff, working collaboratively with the study developed a set of objectives which were used to help guide the development of the master plan. These objectives were confirmed through public and stakeholder consultations and include the following:

Documenting Existing Conditions	Prepare an inventory and undertake an assessment of existing trail and active transportation routes Town-wide.
Establish a Network of Community Connections	Recommend a Trail and AT network including connections to urban and rural communities, areas of natural and cultural significance and surrounding municipalities.
Increase Connectivity	Identify missing links and barriers and recommend a strategy for improved connectivity.
Establish Design Guidelines	Illustrate and provide design guidance and standards for the construction of Trail and AT facilities.
Identify Trail and AT Programs	Recommend a set of Trail and AT education, encouragement, promotion and enforcement programs.
Engage the Public	Consult with the public and local stakeholders from a range of different ages and abilities.



Facilitate Strategic Implementation

Identify financial implications, priorities and potential partnerships as part of a phased implementation plan.

1.4 Vision & Goals for Trails and Active Transportation in Georgina

One of the initial steps in the study process was the development of a long-term vision and set of goals to help guide the development and implementation of Trail and AT facilities and programming. The long-term strategic vision for Trails and Active Transportation in the Town of Georgina is as follows:

“The Town of Georgina recognizes the health, economic and quality of life benefits associated with Trails and Active Transportation (AT) and supports connecting local (urban and rural) communities with key destinations including areas of natural, recreational and cultural significance and surrounding municipalities through a continuous system of on and off-road Trails and Active Transportation (walking and cycling) routes for the use of residents and visitors of all ages and abilities.”

The vision is supported by a number of more specific objectives which the master plan is intended to help achieve through implementation. The objectives include:

- 1 Increase trail and active transportation facility use.
- 2 Improve access to urban and rural communities.
- 3 Improve connectivity and continuity between gaps and barriers in the existing system.
- 4 Increase Trail and AT (on and off-road facilities) options for recreational and utilitarian trips.



INTRODUCTION

5

Improve Processes to facilitate Trail and AT facility implementation.

6

Increase funding and partnership opportunities to support Trail and AT facility development.

1.5 Organization of the Report

The master plan report has been divided into six sections which are presented in **Table 1.3**.

Table 1.3 – Sections Included in the Master Plan

Section No.	Information Included
1.0 Introduction	<ul style="list-style-type: none">• Overview of the reasoning behind the development of the plan.• Highlights from the process used to prepare the network and master plan report.• Study objectives, vision and goals.
2.0 Trends & Best Practices	<ul style="list-style-type: none">• The benefits of Trails and AT facilities.• A description of the different user groups the network is intended to be developed for.• A high level summary of some of the Trail and AT best practices from surrounding communities.
3.0 Building Blocks	<ul style="list-style-type: none">• A review of the existing trail and active transportation conditions within the Town.• A summary of existing policies and plans which support the development of the master plan.• A description of Trail and AT opportunities and constraints identified by the study team and informed by input from the public.
4.0 The Trails & AT Network	<ul style="list-style-type: none">• A review of the approach used to develop the Trail and AT network.• A description of the different Trail and AT routes (a hierarchy) included in the network.• Key network highlights and design concepts.
5.0 Planning for Trails & AT	<ul style="list-style-type: none">• A review of key planning and design considerations to support and facilitate the implementation of the network.• An overview of potential promotion, marketing and maintenance initiatives which could be explored by the Town to complement the network infrastructure.



Table 1.3 – Sections Included in the Master Plan

Section No.	Information Included
6.0 Implementation	<ul style="list-style-type: none">• A detailed implementation strategy for the master plan and network including specific roles and responsibilities as well as an implementation schedule and network management tool.• A phased approach to the implementation of the network as well as a review of suggested performance measures and implementation tracking tools.



2.0 TRENDS & BEST PRACTICES

2.1 Benefits of Trails and Active Transportation

There is clear evidence of the growing demand for facilities that support more active forms of transportation and an overall increase in active and sustainable living. Living an active and sustainable lifestyle is realistically about integrating active and sustainable modes of transportation into day to day activities for recreational and utilitarian purposes.

The National Collaborating Centre for Environmental Health released a research paper in 2010¹ which identifies some of the additional effects and changes that could be realized due to increased investment in active forms of transportation and recreation. The report states that:

- The proportion of trips that are made using active transportation modes remains low in Canada compared to many European countries. There is an opportunity to increase walking and cycling and realize the associated population health benefits.

¹ Reynolds, C., Winters, M., Reis, F. and Gouge, B. "Active Transportation in Urban Areas: Exploring Health Benefits and Risks". National Collaborating Centre for Environmental Health (June 2010).



TRENDS & BEST PRACTICES



- Infrastructure modifications such as separated cycle lanes, connected networks of sidewalks and signalized crossing-points for busy roads can reduce injury risks for current pedestrians and cyclists, while encouraging new users to try active transportation modes.
- Increased use of public transportation may have a corresponding increase in active transportation trips to access transit stops.
- There is a “safety’ in numbers’ effect for pedestrians and cyclists, so increasing the proportion of trips by active transportation modes can lower the rate of injuries.
- Compared to those travelling by motor vehicles, people who walk or cycle may be able to reduce their exposure to air pollution through informed route choices, but this depends on the traffic levels on selected routes, timing and duration of the trip.
- In order to realize the benefits of active transportation, risks to individuals who walk and cycle should be evaluated. Further research is needed to understand how to mitigate these risks.

As people become more aware of the negative health effects that come from lack of physical activity and reduced air quality from our reliance on motor vehicles, the demand for municipalities to adopt more sustainable land use and mobility strategies increases. The development of infrastructure, policies and promotional strategies which respond to this growing demand can also yield a number of benefits. These benefits are primarily in the form of a reduction in travel costs, reduction of greenhouse gas emissions, a more efficient use of public space, reduced air and noise pollution, the creation of more urban centres conducive to active transportation and a mitigation of the urban heat island effect.

Benefits of active and sustainable transportation and recreation can also include but are not limited to Environment, Health, Economy / Tourism, Housing, Education, Public Space, Community (Health & Safety) and Transportation.

Figure 2.1 illustrates the connection of these elements in the development of sustainable and healthy communities which has been adapted from the Sustainable Communities Index –

<http://www.sustainablecommunitiesindex.org/>



TRENDS & BEST PRACTICES



Figure 2.1 –Potential Benefits of a Sustainable Community

For the purposes of this study, a summary of benefits which are directly and indirectly impacted by investment in active transportation and recreation has been developed. The information included is based on research conducted in Canada and internationally and is documented in **Appendix A – Summary of Benefits**. Highlights from the summary are presented in **Table 2.1**.

Table 2.1 – Trail and Active Transportation Benefits (Overview)

Benefits	Key Highlights
Environment	<ul style="list-style-type: none"> Active forms of transportation are both energy efficient and non-polluting. When used, active modes of transportation conserve natural resources and provide large energy savings for the user as well as the community. By engaging in active forms of transportation which produce a 1% shift in modal distribution there can be a significant reduction in fuel consumption levels.
Community Health & Safety	<ul style="list-style-type: none"> By investing in active transportation or trail development, a community provides its residents with more opportunities for physical activity and improved air quality through reduced emissions. With more opportunities to be physically active, people are more likely to lead healthy and active lifestyles and reduce their risk of chronic diseases. Investment in active transportation and trail infrastructure and programming is proven to increase a community's quality of life and



TRENDS & BEST PRACTICES



Table 2.1 – Trail and Active Transportation Benefits (Overview)

Benefits	Key Highlights
	<p>increases the overall liveability of a community.</p> <ul style="list-style-type: none"> By increasing people's levels of activity and decreasing the amount of time spent in cars, there can be a decrease in health care costs. For example, someone who increases their activity levels may reduce their risk of chronic diseases such as heart disease, stroke, and diabetes.
Transportation	<ul style="list-style-type: none"> By increasing investment in trail and active transportation facilities, residents and visitors are provided with more mode choices. With an increase in the number of modal choices residents and visitors may feel less dependent on their single occupant vehicles. In some cases an increase in investment in active transportation and trails can decrease the number of people on major roadways which can, in turn, increase the road's lifespan / longevity.
Asset Management	<ul style="list-style-type: none"> Increased investment and use of AT infrastructure can provide a means of appreciating and assisting in the protection of natural and cultural heritage resources. Similar to the transportation benefits, by decreasing the number of people on the road, communities may be able to increase the lifespan of their community assets.
Community Building	<ul style="list-style-type: none"> By engaging members of the community in the design and development of AT related infrastructure (including trails), it can bring together community residents. When residents become passionate and committed to an initiative there can be an increase in community spirit. When the design standard increases for community facilities it can, in some cases, spur on stewardship from local groups or engaged individuals.
Economic & Tourism	<ul style="list-style-type: none"> Increased investment in cycling and trail infrastructure can increase local tourism and investment. Cyclists are more willing to spend time and money in communities which clearly support cycling and can in some cases can be a draw for international tourism. As routes and infrastructure is developed there is also an increasing demand for supportive amenities. Communities may wish to invest in a local bike shop or tourism booth to promote cycling routes. In these cases, there are job opportunities and increased local investment which may occur.



TRENDS & BEST PRACTICES



It is recommended that the information contained in this summary be used by the Town to promote the use of trails and active forms of transportation. More specifically, the Town is encouraged to adapt the information to generate promotional brochures, posters or other promotion media for both residents and visitors. A collaborative effort between the Town and the York Region Public Health should be explored once the master plan has been adapted to develop and distribute promotional materials.

2.2 Who Are The Users?

The design and development of a trails and active transportation network is not a one-size-fits-all approach. It is important that facility designs take into consideration the users that are being designed for. Based on the scope of this study, assumptions were made regarding the user groups and the types of trips. These assumptions helped to establish the route alignment, types of facilities and timeline for many of the projects.

The following are some of the key assumptions regarding Trail and AT user groups and trip types for the Town of Georgina Trails and Active Transportation Master Plan.

2.2.1 What is Active Transportation?

Public Health Agency of Canada defines active transportation (AT) as:

“Any form of human-powered transportation – walking, cycling, using a wheelchair, in-line skating or skateboarding.”

2.2.2 What types of Trips can they Include?

Active Transportation can be defined in more detail to include the use of active modes of transportation for different types of trips. **Table 2.2** identifies three high-level categories that active transportation users could be categorized in.



Table 2.2 – Types of Active Transportation Trips (High-Level)

Utilitarian
Includes pedestrians and cyclists who use active forms of transportation for day-to-day activities such as getting to and from work, school, errands, etc. These cyclists often use the streets that are part of the cycling network year-round in all weather conditions as opposed to those roads which do not make up part of the formal cycling network. In some cases they may choose to use public transit or other modes of transportation during the winter season. Typically, utilitarian cyclists have good mobility skills and are cognisant of the "rules of the road".
Recreational
Includes pedestrians and cyclists who typically use the network for fitness or leisure purposes. Their trips are typically used for travel on weekends as opposed to weekdays and will consist of trips to and from destinations of cultural or natural significance including off-road recreational trails. The cyclist will typically use secondary / local neighborhood connections as part of their overall network.
Touring
Includes cyclists who use cycling as a means of exploring areas of significant long-distances from their point of origin. Trips can vary from full day excursions to multi-day trips. These cyclists may plan their trips in advance and are willing to spend money for accommodation and food at their destination point. In some cases they travel in groups.

Trip type can be defined even further within the areas of recreational and utilitarian travel. **Figure 2.2** and **Table 2.3** highlight these trip types. It can be assumed that more likely than not, it will typically be those people who work and live within their communities or in more urban areas that engage in many of these trips. Cycling and pedestrian activities that occur on more rural areas tend to be recreationally based.



Figure 2.2– Types of Active Transportation Trips
Source: MMM Group

Table 2.3 – Types of Active Transportation Trips

Active Destination Oriented Trips
<ul style="list-style-type: none">Using Active Transportation modes for shopping, visiting friends, attending sporting events, running errands, etc.
Active Commuting
<ul style="list-style-type: none">Using Active Transportation to get to and from work and school including trips to drop off children at day-care or school.
Active Recreation
<ul style="list-style-type: none">Using Active Transportation modes for fitness and recreation (e.g., hiking, walking, cycling, etc.)
Active Workplace Travel
<ul style="list-style-type: none">Using Active Transportation modes during the business day to attend meetings, deliver materials, etc.



2.2.3 Who are the User Groups?

Typically walking and cycling activities are the most prominent uses of on-road AT facilities and off-road trails. There are different types of pedestrians and cyclists which are illustrated in **Figure 2.3**.



Figure 2.3 – Different Types of Pedestrians and Cyclists

Source: MMM Group

It is important to note that other user groups may use the system once the facilities have been developed. These may include but not limited to in-line skaters, e-bikes, cross country skiers and in some locations equestrians, snowmobiles and ATVs where permitted. That said, the proposed Trails and AT network for Georgina is primarily designed for non-motorized travel and particularly pedestrians and cyclists.

When considering the different types of cyclists who could ultimately use the Town-wide trail and cycling network, there are four categories, based on level of comfort and skill that can be assumed. **Figure 2.4** identifies these categories and how they are representative of the typical cycling population. Additional definitions of these groups can be found in **Appendix D – Trail and AT Design Guidelines**.



TRENDS & BEST PRACTICES

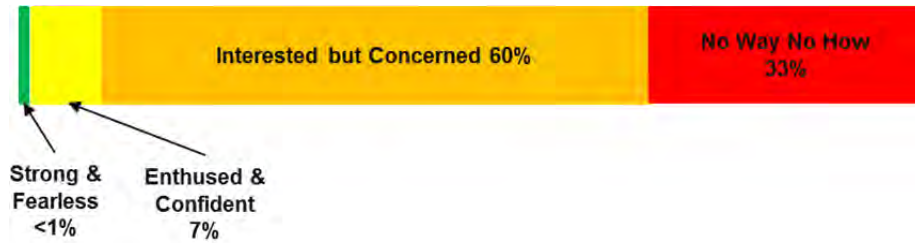


Figure 2.4 –Potential Cyclist Types
Source: The City of Portland, Oregon

This Master Plan focuses on recommending programming and infrastructure which is geared towards cyclists and trail users that fall within the “interested but concerned” category. They are the most likely to engage in active forms of transportation and recreation if their concerns regarding safety, signing and route connections are addressed with more infrastructure, better maintenance, better educations and Town-wide promotion.



Young Cyclist on Boulevard in Georgina, ON - Source: MMM Group

2.3 What Are Others Doing in Southern Ontario?

Understanding what other communities of a similar scope and scale are doing with regard to trail and active transportation development can be of significant benefit when developing and implementing an active transportation related master plan. It is the lessons learned from these projects / initiatives that can help to streamline the implementation process for the Town of Georgina. It can also be helpful when selecting which initiatives / recommendations should be considered for initiation or to help avoid or mitigate potential issues which may arise.



TRENDS & BEST PRACTICES



As part of developing the Town of Georgina's Trails and Active Transportation Master Plan, the study team has reviewed a number of communities of a similar scope and scale to highlight some lessons learned and successes.

When the Town proceeds with the implementation of the master plan network and recommendations, it is suggested that they consider these best practices as they relate to issues or opportunities that may arise.

Town of Aurora

Adoption Date of Master Plan:

Town of Aurora Trails Master Plan - 2011

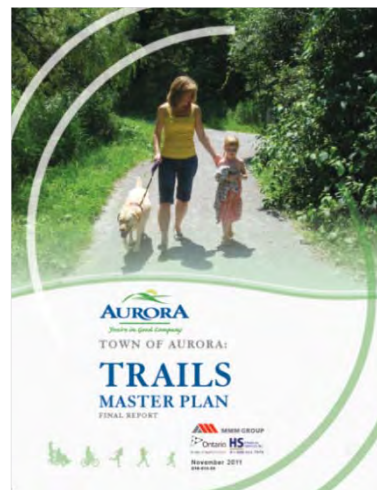
Budget Allocated to AT & Trails:

In the 2013 Municipal Budget – approximately \$600,000.00 was allocated to trail or active transportation related projects.

Population: 53,203

Successes:

- In 2013, the Town updated their Streets, Parks and Trails Map, now available electronically on their municipal webpage or at municipal offices (Town Hall or Parks Division on Scanlon Court);
- Have successfully developed and connected the Nokiidaa Trail system – a 35km linkage between the municipalities of Newmarket, Aurora and East Gwillimbury. The project was originally initiated as a Special Millennium Partnership project between the three municipalities.
- In addition to the 35km of Nokiidaa Trail the Town has also invested in the development of over 25 km of on and off-road trail facilities Town-wide.
- Key trail related information is consolidated and posted on the Town's municipal webpage (www.town.aurora.on.ca/trails).
- The Town has recently adopted their Adopt-A-Park Bench and a Park Bench Donation program which allows residents to purchase or Adopt a park bench along a municipally owned and operated trail. The monies paid for the bench will be allocated to the development of trail facilities Town-wide.





TRENDS & BEST PRACTICES



- Following the adoption of the Trails Master Plan a Trails and Active Transportation committee was developed to help guide the implementation of the network. A TOR was generated for the committee including details on the membership, duties and functions and reporting structure. The Trails and AT committee is supported by a Trail Sub-Committee which focuses specifically on the development of trails as well as the Nokiidaa Trail Committee which deals specifically with issues related to the Nokiidaa trail system.

Town of East Gwillimbury

Adoption Date of Master Plan:

Town of East Gwillimbury Trails and Active Transportation Master Plan - 2012

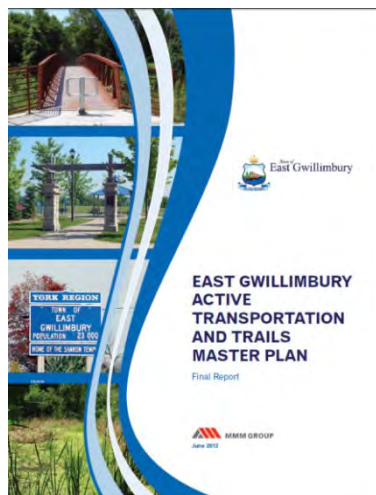
Budget Allocated to AT & Trails:

~\$300,000.00 allocated to trail or active transportation related infrastructure in 2013.

Population: 22,473

Successes:

- Since the adoption of the Trails and Active Transportation Master Plan the Town revised the mandate and name of their Trails Advisory Committee to Trails and Active Transportation (AT) Committee to help facilitate the implementation of the master plan and identify Trail and AT related priorities Town-wide.
- The Town is responsible for the design and maintenance of 7 municipal trail systems including Brown Hill Regional Forest, Holland River Trail, Bendor and Graves Regional Forest, Simcoe Trail, Sutton Zephyr Rail Trail and Vivian Creek Trail.
- The Trail and AT Advisory Committee has established a number of Trail Walks which occur yearly and are open to the public. The Walks are intended to help promote the safe use of trails and to increase exposure of existing trails throughout the Town.
- The Town has developed an online mapping database of information pertaining to walking facilities and cycling challenge courses The map is found on the municipal webpage and helps residents and visitors to identify key AT related locations in the Town



(http://www.eastgwillimbury.ca/Things_To_Do/Parks_Trails_Sport_Fields/Parks_Sports_Field_Map.htm)

TOWN OF GEORGINA

Trails & Active Transportation Master Plan



- The Town has also developed a Trails Brochure in 2012 which helps to promote the safe and enjoyable use of trail facilities Town-wide. The brochure can be found online but is also available in hard copy at municipal offices

<http://www.eastgwillimbury.ca/Assets/CPI/Recreation+Leisure/Trails/Trails+Brochure.pdf>.

Town of Milton

Adoption Date of Master Plan:

Town of Milton Trails Master Plan was last adopted in 2009. A Trails and Cycling Master Plan is currently being developed.

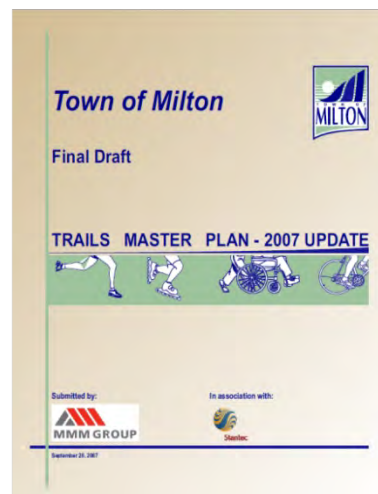
Budget Allocated to AT & Trails:

\$1.5M was allocated in 2013 to be spent on Sidewalks & Bike paths on Regional Roads. \$614,983 is allocated to the development of trails.

Population: 84,362

Successes:

- A buffered trail in the Scott Tributary (an asphalt and / or limestone screening pathway, pedestrian bridge, site furniture and Planting) and a Linear Park - Willmott are anticipated to be implemented in 2013.
- The Town has developed and updated their Community Connections Map yearly which illustrates transportation alternatives including the existing on and off-road trail and cycling facilities.
- The Town developed their "Take to the Trails" brochure which provides key information on municipal trail facilities.
- The Town provides residents and visitors with an online reporting resource where respondents are able to provide their comments regarding trail issues that require repairs, maintenance etc.
- The Town provides trail touring recommendations which are posted online and are identified for the public.
- The Town's Trails Working Group is actively involved in the future development and design of trail and cycling related initiatives. Their role is to provide public input to the development process.





TRENDS & BEST PRACTICES



- The Town has developed an approach to snow ploughing in the winter including designated sidewalks and odd-road trails. Maps of these areas are available online for public consumption.
- The Town has introduced bike racks available on all Town-wide transit services.
- The Town of Milton holds a "Move, More, Milton" program over the course of the month of March to promote active living and increased fitness.

City of Markham

The Cycling Master Plan was finalized and adopted in 2010.

Budget Allocated to AT & Trails:

Project Specific

Population: 301,709

Successes:

- Since the development of the master plan the City has prepared and published a cycling map which is used to promote the use of cycling facilities City-wide. The map was last updated in 2012. The map can be found online (www.markham.ca/wps/portal/Markham/RecreationCulture/ParksAndPathways/CyclingMaps) and in hard-copy at municipal offices. Included on the webpage is information about cycling safety as well as how to interpret key signage found throughout the network.
- Since the adoption of the master plan the City developed a Cycling and Pedestrian Advisory Committee. The committee provides consultation and input to the City of Markham on components of the Cycling Master Plan and cycling and pedestrian issues in Markham.
- Following the adoption of the Cycling Master Plan, the City retained MMM Group to prepare a 5-year pathways implementation strategy to help prioritize the implementation of proposed routes and initiatives.
- In 2012, the City developed a Bicycle Facility Selection Guide to help City staff consistently design and implement cycling and cycling related facilities City-wide.



TOWN OF GEORGINA

Trails & Active Transportation Master Plan



TRENDS & BEST PRACTICES



- In 2012, the City received recognition for their development of almost 400km of on and off-road cycling facilities by receiving the designation of a bicycle-friendly community.
- As part of the overall network, the City of Markham has developed 22km of scenic pathways including 12 pedestrian and cycling friendly bridges. The facilities are illustrated on the Markham Parks and Pathways map which can also be used as an interactive route development tool.

Town of Halton Hills

Adoption Date of Master Plan:

The Town of Halton Hills adopted their Cycling Master Plan in 2012.

Budget Allocated to AT & Trails:

As part of the Recreation & Parks operational budget, \$4.32M has been committed to Trail and active transportation related initiatives focusing on cycling.



Population: 59,008

Successes:

- Following the adoption of the master plan the Town organized their Trails and Cycling Citizens' Advisory Committee. The committee provides advice and input to the Town on matters relating to the design, construction and funding of a trails system as well as the implementation of the Cycling Master Plan.
- The Town has initiated their 2013 Cycling Program which includes a number of Town-wide initiatives including:
 - 200,000 km Cycling Challenge – information on the challenge can be found online at www.bikechallenge.ca. The community of Halton Hills has challenged itself to cycle 200,000km. Riders can log their kilometres online once completed. Monies have been committed to the Georgetown Hospital Foundation by local businesses to reward the efforts of Halton Hills residents.
 - A Bike to Work Day on Monday May 27th, 2013 – now in their second year (2013), the Town organizes and encourages local employees to ride their bikes to work on one day throughout the year to help promote utilitarian cycling.



TRENDS & BEST PRACTICES



- Risk Watch – is a multi-agency project spearheaded by the Halton Hills Fire Department. The safety program is attended by all local grade 4 students to provide them with the knowledge and information on how to cycle safely.
 - Bike It to the Market 2013 – This initiative was held in conjunction with the Big Daddy festival where those who biked to the market / festival were provided with a pancake breakfast. Free bike valet parking was provided by local volunteers.
 - Bike it to the Leathertown Festival – First initiated in 2013 this 22km ride follows a route through the back roads of Halton Hills to Acton. When in Action there is bike parking available and time to enjoy the local attractions.
- The Town has established a bicycle friendly community sub-committee which was initiated to help develop a successful application to the Share the Road Coalition to achieve Bicycle Friendly Community Designation.
- The Town has developed a hub for cycling and cycling related information on their municipal webpage. All information can be found at (www.haltonhills.ca/CyclingEvents/index.php). For inquiries about existing initiatives and programs residents and visitors are able to send an email to hbcycling@haltonhills.ca.
- Since the adoption of the master plan a number of cycling infrastructure improvements have been made including:
 - Bike lane on Delrex Blvd
 - Bike Lane on Danby Road
 - Multi Use Path on Wallace Street
 - Bike Lane on 17th Sideroad
 - Edge Line on Trafalgar Road
 - Bike Lane on Queen Street Acton
 - Bike lockers at the Civic Centre
 - Covered bike racks at the GO station



City of Oakville

Adoption Date of Master Plan:

The Active Transportation Master Plan (Cycling and Walking Master Plan) was completed and adopted by Council in 2009.

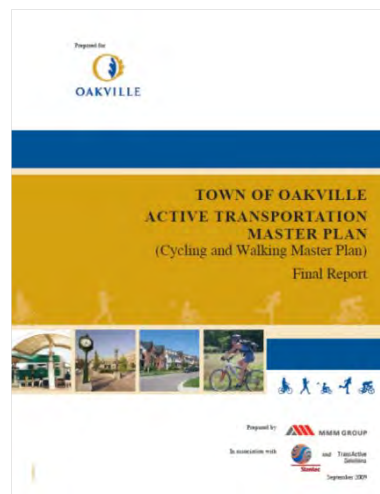
Budget Allocated to AT & Trails:

\$1.42M was allocated in 2013 to continue the development and implementation of the Town-wide AT Network.

Population: 165,613

Successes:

- In 2012, 2,510 km of trails were constructed. Their original goal was to develop 3000 km of trails by the end of 2012.
- A number of detailed design studies have been completed throughout the Town of Oakville to retrofit roads to accommodate cycling and walking activities.
- The Town initiated an "Adopt-a-Trail" program in conjunction with their "Adopt-a-Park" program which allows members of the public to invest in future trail development and an increased sense of ownership and responsibility for some of the Town's trail systems.
- The Town of Oakville has a cycling club which helps to promote cycling throughout the City.
- The Town developed a seasonal trail maintenance program including a budget allocated for both winter and summer maintenance (e.g. snow clearing)



TRENDS & BEST PRACTICES

City of Kitchener

Adoption Date of Master Plan:

City of Kitchener Cycling Master Plan
(2010)

Budget Allocated to AT & Trails:

Cycling related promotion and outreach initiatives have a budget of \$250,000.00 dedicated yearly to the development of programs and initiatives. Additional funding is gathered through partnerships with the local community. This does not include monies allocated to hard infrastructure.



Population: 219,153

Successes:

- Since the adoption of the master plan the City has embarked on numerous promotion and outreach initiatives related to cycling as part of the BikeKitchener initiative which promotes and fosters a sustainable cycling culture among City residents. Relevant information can be found online at the BikeKitchener.ca webpage. This also provides residents and visitors with a common location for cycling related information.
- The Cycling master plan is supported by a number of other local and regional policies and plans which speak to the development of active transportation linkages including the City's Multi-use trails and Pathways Plan as well as the recently adopted Regional Active Transportation Master Plan.
- Promotional events used by the City to increase cycling throughout the City include BikeFest, the Coldest Ride of the Year, Friday Night Bike Socials, Ride the Sharrows Series and Bike Yoga.
- The City has engaged with local businesses as well as the Cycling Advisory Committee to move the cycling agenda forward and to collaborative work to establish new programs and outreach initiatives as well as implement components of the master plan.
- The City of Kitchener recently completed their redesign of King Street to include a single-file approach for motorists and cyclists with the application and use of super-sharrows. Educational information on their use can be found on the City's webpage.

TOWN OF GEORGINA

Trails & Active Transportation Master Plan



TRENDS & BEST PRACTICES



- Secure and free bicycle parking is now provided in three locations throughout the City to encourage a greater number of commuter and recreational cyclists. The City has engaged with local artists to provide visually appealing bicycle racks at key locations throughout the downtown core.
- In 2013 the City of Kitchener undertook a cycling survey to gauge the progress of cycling in the City in order to inform next steps for program development and master plan implementation.
- The BikeKitchener website also contains a [Bike Map](#) which can be used to identify cycling trips throughout the community as well as other multi-use trails. The map is available online as well as at City Hall or local community centres.

City of Barrie

Adoption Date of Master Plan:

The Multi-modal Active Transportation Master Plan was adopted in March 2013.

Budget Allocated to AT & Trails:

A budget of over \$300,000.00 was approved for physical infrastructure improvements throughout the City. No documentation found for cost of programming and outreach.

Population: 187,013

Successes:

- In 2008 the City of Barrie hosted an Active Transportation Workshop which was facilitated by the Simcoe Muskoka District Health Unit. Following the workshop Council approved 13 active transportation recommendations including: striving to implement active transportation facilities at civic facilities, incorporating facilities in all new transportation infrastructure projects where feasible, integration of active transportation facilities in private development, developing an active transportation working group, developing and distributing information to the public about active transportation facilities and programs, promoting individual and community health benefits, developing and promoting programs which encourage active transportation, develop and publically release reports on active

The City of
BARRIE

City of Barrie
Secondary Plan, Background
Studies & Infrastructure Master
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TRENDS & BEST PRACTICES



transportation, engage in partnerships with local developers and businesses, engage in external partnerships, maximize the use of current facilities and develop a formal active transportation network.

- The City developed the Active Transportation Barrie Working Group which is a community based group that brings active transportation stakeholders and community partners together to focus on the common goal of promoting and facilitating active transportation initiatives.
- The City has developed an updates an [Active Transportation Webpage](#) which serves as a hub of municipal information regarding active transportation including cycling and pedestrian safety and focuses on promoting the Walk or Wheel Active Transportation Barrie initiative.
- The City strongly supports the active transportation Barrie awards which helps organizations or businesses become recognized as an active transportation supporter or contributor. The application form is provided online with previous recipients that include Firebird Community Cycle and Johnson Street Public School Walking School Bus.
- 3 Bicycle lockers and 2 Streetpod Bike Racks were implemented at City Hall and are free for the public to use. Additional initiatives include the Johnson street Public School Walking School Bus as well as the Firebird Community Cycle program which accepts donations of old bikes and rebuilds them for those who are unable to afford bicycles.
- There are numerous trails within the City of Barrie as well as some on-road cycling facilities which are promoted through trail and bike maps uploaded onto the City's webpage.

The Trends and Best Practices reviewed for this study provided a foundation of knowledge which was used to inform the development of a Trails and Active Transportation Plan for the Town of Georgina.



3.0 BUILDING BLOCKS

3.1 Understanding Georgina

Georgina is the northern most municipality in York Region. The Town is made up of both urban and rural communities that are rich in history. The Town is also known for its areas of natural and cultural significance as well as local community attractions, year round recreational opportunities (e.g. boating and ice fishing), Sibbald Point Provincial Park, scenic Lake Drive along the south shore of Lake Simcoe and cottage communities making it a great place to live and a destination for seasonal visitors and tourists during the summer months. With an ongoing influx in residents and visitors the demand for trails and active recreation routes has grown significantly over the years which will only be further enhanced and highlighted with the implementation of the Region's Lake to Lake Cycling Route and Walking Trail.

The Town of Georgina, Regional Municipality of York and Province of Ontario are all experiencing significant demographic changes; most prominently, an increasing percentage of the population is aging. In order to further understand the wants and needs of the municipality, the study team undertook a review of the key socio-demographic trends.



BUILDING BLOCKS



These trends were informed by 2011 Statistics Canada short-form Census data and form a community profile for the Municipality. This community profile has helped to influence community priorities and needs related to the development of the Trails and AT network, proposed facility types and recommendations. **Table 3.1** includes key socio-demographic findings which from the Township of Georgina's Community Profile.

Table 3.1 – Town of Georgina Socio-Demographic Summary

Town of Georgina Community Profile	
Geographic Context	<ul style="list-style-type: none"> Formed through municipal amalgamation in 1970 The Town of Georgina is part of the Regional Municipality of York. Located on the south shore of Lake Simcoe, it forms part of the northern border of the Greater Toronto Area.
Population Forecast	<p>The 2011 short-form Census reported a population of 43,517 for the Town of Georgina, with a mid-year 2013 estimate of 47,361.ⁱ Georgina is also home to a large number of seasonal residents; the Town estimates that approximately 4,800 seasonal residents by the end of 2012.ⁱⁱ</p> <p>Source: Region of York Official Plan, 2010; Statistics Canada, 2011</p>
Immigrant Population	<ul style="list-style-type: none"> Based on estimates from the 2011 National Household Survey, the Town has a considerably lower percentage of immigrants (11%) than the Region (45%) and the province (29%). Nearly 60% of Georgina's immigrants arrived before 1980 and 66% are of European descent. This suggests a high level of homogeneity in the population, although this may change over time as immigration increases.

ⁱ York Region Office of the CAO, Long Range Planning Branch based on Statistics Canada data and CMHC Housing Completion data. 2013.

ⁱⁱ Town of Georgina. Household and Estimated Population Counts 2009-2012. 2009



BUILDING BLOCKS



Table 3.1 – Town of Georgina Socio-Demographic Summary

Town of Georgina Community Profile	
Population Change by Age Group	<ul style="list-style-type: none"> For population changes indicated between 2001, 2006 & 2011 refer to the table below. Consistently strong growth has been witnessed in the older adult cohort (a 63% increase between 2001 and 2011), as well as the senior population (27%).

Population Change by Age Group (2006-2011 Census) Statistics Canada

Age Cohort	2001	2006	2011	Change
Children (0-9)	6,055	5,215	4,835	-20%
Youth (10-19)	5,875	6,745	6,230	6%
Young Adult (20-34)	6,860	6,970	7,430	8%
Mature Adult (35-54)	13,285	14,530	14,350	8%
Older Adult (55-69)	4,310	5,590	7,030	63%
Senior (70+)	2,870	3,300	3,640	27%
Total	39,265	42,350	43,515	11%

Forecasted Population Growth by Age Group	<ul style="list-style-type: none"> For forecasted population change by age group between 2011 and 2031 refer to the table below. Despite the aging trend, positive growth is expected across every age cohort over the long-term.
--------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Forecasted Population Change by Age Group (2011-2031) Statistics Canada

Age Cohort	2011	2021	2031	Growth
Children (0-9)	4,835	5,939	8,014	66%
Youth (10-19)	6,230	6,226	7,146	15%
Young Adult (20-34)	7,430	12,344	12,172	64%
Mature Adult (35-54)	14,350	15,158	19,716	37%
Older Adult (55-69)	7,030	12,059	13,036	85%
Senior (70+)	3,640	6,202	10,223	181%
Total	43,517	57,900	70,300	62%



Table 3.1 – Town of Georgina Socio-Demographic Summary

Town of Georgina Community Profile	
Median Income	<ul style="list-style-type: none">• According to the 2011 National Household Survey, Georgina's median income was \$31,434 (individuals aged 15 and over), which was nearly identical to the median figure for the Region, and 3% higher than the Provincial median.• However, the 2011 National Household Survey reported a median household income of \$69,928 for all private households in Georgina, 27% lower than the Region and 5% higher than the Provincial median.
Transportation	<ul style="list-style-type: none">• Georgina generally has a large commuter population. Over 93% of the employed workforce drive to work or are a passenger in a private vehicle. This is slightly higher than the Regional and Provincial averages of 86% and 79%, respectively.• Less than 4% of the workforce walk or cycle to work. Georgina is largely a rural municipality with pockets of lower density urban centres this is not a surprising trend.• According to the Region, 18% of the streets in Georgina have sidewalks, the lowest level in the Region. The Town also provides 37 kilometres of cycling routes, with 14 kilometres located in Georgina's urban areas.ⁱⁱⁱ

3.2 Planning Context: A Summary of Key Policies & Plans

There is growing awareness of the negative effects that a lack of physical activity has on human health. People are now seeing the benefit of a reduced reliance on motor vehicles and the use of more sustainable transportation modes in both urban and rural communities in Ontario and across Canada. In response to this growing awareness, municipalities, agencies and other organizations at all levels of government are developing policies in support of the planning, design, implementation and promotion trail and active transportation systems. The Town of Georgina is no exception.

ⁱⁱⁱYork Region. Living in York Region: Our community check-up. Context Indicators Workbook. 2011.



BUILDING BLOCKS



There is desire among staff, politicians and residents to develop a network that connects local communities with key destinations including areas of natural, recreational and cultural significance and surrounding municipalities through a continuous system of on and off-road trails and AT routes. The system is intended to be used by residents and visitors of all ages while supporting accessibility for people of all abilities.

In 2010, the Town of Georgina updated their Official Plan, a document which is intended to guide future municipal development up to the year 2021. There are a number of relevant sections in the Official Plan which support the development of trail and active transportation related infrastructure and programming. Some examples include section 3.1, 5.2, 5.6 and 7.2 which are described in further detail in **Appendix B – Summary of Background Information.**

York Region is another key partner that has made the development of trail facilities and active transportation routes a priority. In 2006 they established an award winning Pedestrian and Cycling Master Plan which has helped to make the Region and many of its local municipalities, leaders in the area of trail and active transportation development, promotion and tourism. The Region took this one step further in 2012 by undertaking a feasibility study which explored the development of a cycling route and walking trail connecting Lake Simcoe to Lake Ontario. When completed in the next 5-10 years, the Lake to Lake trail will give municipalities, like the Town of Georgina, the opportunity to link their own trail systems into the Lake to Lake network. A key component of the Lake to Lake route alignment is found along the shores of Lake Simcoe in the Town of Georgina and this also forms a key spine route for the Town of Georgina trails and active transportation network.

In addition to those policies and plans mentioned above there are a number of other influential documents at the federal, provincial, regional and Town level which speak to the development of active transportation and trail facilities. Applicable policies and plans were reviewed as a key step in developing the master plan.

Table 3.2 is a summary of the policies and plans which influenced / guided the development of the Trails and AT Master Plan for the Town of Georgina. A detailed summary of the policies and plans which were reviewed can be found in **Appendix B.**



BUILDING BLOCKS



Table 3.2 – Summary of Related Policies and Plans

Canadian Federal Government
<p>“The promotion of active transportation has led to special emphasis on on-road / off-road facilities for non-motorized movements within cities.” (Transport Canada, 2011)</p>
<p><u>Federal Policies and Plans</u></p> <ul style="list-style-type: none"> • Transport Canada – “Strategies for Sustainable Transportation Planning: a review of practices and options” (2005) • Federation of Canadian Municipalities – “Communities in Motion: Bringing Active Transportation to Life Initiative” (2008) • Trans Canada Trails Association Strategies (ongoing) <p><u>Federal Organizations</u></p> <ul style="list-style-type: none"> • Trans Canada Trails Association
Ontario Provincial Government
<p>“Our vision is for a safe cycling network that connects the province, for collision rates and injuries to continue to drop, and for everyone from the occasional user to the daily commuter to feel safe when they get on a bicycle in Ontario.” (#CycleON, 2012)</p>
<p><u>Provincial Policies and Plans</u></p> <ul style="list-style-type: none"> • Provincial Policy Statement (2014) • Bill 51 – Plan Reform (2006) • Municipal Act (2001) • Highway Traffic Act (1990) • Ministry of Health and Long Term Care (ongoing) • Accessibility for Ontarians with Disabilities Act (2005) • Draft AODA Amendment “Design of Public Spaces Standards” (2010) • Ontario Trails Strategy (2010) • Ontario Public Health Standards • Transit Supportive Guidelines (2012) • Places to Grow Act (2005) • Metrolinx: The Big Move – Transforming Transportation in the Greater Toronto and Hamilton Area (2008) • The Greenbelt Act (2005) • #CycleON: Ontario’s Cycling Strategy (2012) <p><u>Provincial Organizations</u></p> <ul style="list-style-type: none"> • Ontario Trails Council • Share the Road Coalition



BUILDING BLOCKS



Table 3.2 – Summary of Related Policies and Plans

Regional Government
<p>“The Lake to Lake Route will be a major recreational and commuter ‘regional-trail’ and is expected to be a major destination and amenity for all York Region and City of Toronto residents and visitors.” (Lake to Lake Cycling Route and Walking Trail Study Overview Report, 2013)</p>
<p><u>Regional Policies and Plans</u></p> <ul style="list-style-type: none"> • Vision 2051 – York Region (2010) • Regional Municipality of York Official Plan (2009) • York Region Pedestrian and Cycling Master Plan (2008) • Regional Transportation Master Plan (TMP) Update (2009) • York Region Sustainability Strategy (2007) • The Greenland Trails System Concept Study (2011) • York Region Lake to Lake Cycling Route and Walking Trail Study (2013) <p><u>Regional Organizations</u></p> <ul style="list-style-type: none"> • York Regional Forests and Trails
Local Municipal Government
<p>“...Develop a multi-use trail system that would connect the shoreline areas with other areas within the Georgina Greenlands System, where appropriate, and with linkages to other trails in the Region.” (Town of Georgina OP, 2010)</p>
<p><u>Town of Georgina Policies and Plans</u></p> <ul style="list-style-type: none"> • Town of Georgina Official Plan – Office Consolidation (2010) • Town of Georgina Leisure Services Master Plan (2004) • Town of Georgina Environmental Assessment for the Maskinonge River Pedestrian Bridge (2013) • Town of Georgina Facilities & Amenities Map (2011) • Town of Georgina – Sutton / Jackson’s Point Secondary Plan (2010) • Town of Georgina – Keswick Secondary Plan (2004) • Town of Georgina Socioeconomic Mission and Strategic Plan (2009) • Pefferlaw Secondary Plan – Amendment No. 70 to the Official Plan for the Town of Georgina (2000) • Keswick Business Park Secondary Plan (2008) <p><u>Town of Georgina Organizations</u></p> <ul style="list-style-type: none"> • Georgina Trail Riders Snowmobile Club • Georgina Trail Riders • Morning Glory Provincial Nature Reserve • Sibbald Point Provincial Park • Sibbald Point Cultural Trail • Maidenhair Fern Trail



Table 3.2 – Summary of Related Policies and Plans

Other Local Governments
<u>Surrounding Municipal Policies and Plans</u> <ul style="list-style-type: none">• Town of East Gwillimbury Transportation Master Plan (2009)• East Gwillimbury Natural Heritage System Study (2008)• Town of East Gwillimbury Community Park, Recreation & Culture Strategic Master Plan (2009)• Town of East Gwillimbury Active Transportation and Trails Master Plan (2010)• Town of Innisfil Official Plan & Associated Schedules (2006)• Town of Innisfil Transportation Master Plan (2013)• Township of Brock Official Plan (2007)• Township of Brock Physical Activity Plan (2008)• Township of Uxbridge Official Plan (2012) <u>Surrounding Municipal Organizations</u> <ul style="list-style-type: none">• Simcoe County Trails• Uxbridge Cycling Club• Nokiidaa Trail Association• Tom Taylor Trail Association• Lake Simcoe Trail
Lake Simcoe Regional Conservation Authority
<p>“To provide leadership in the protection and restoration of the environmental health and quality of Lake Simcoe and its watershed with our community, municipal and other government partners.”</p> <p>(Lake Simcoe Regional Conservation Authority)</p>
<u>Lake Simcoe Regional Conservation Authority (LSRCA) Policies</u> <ul style="list-style-type: none">• Lake Simcoe Region Conservation Authority Watershed Development Policies• LSRCA’s Natural Heritage System for the Lake Simcoe Watershed (2007)• LSRCA Focused Future 2014

3.3 Existing Trail & Active Transportation Infrastructure

There are numerous opportunities which the Town can build upon (e.g. the Sutton-Zephyr rail trail, the Lake Simcoe Trail and local trails) to establish a continuous and connected system. Both the built environment and areas of natural significance provide ample space for the development of community-wide linkages.



BUILDING BLOCKS



As a result of the development of AT and trail related plans at the Region and local level and the development of key trail linkages (e.g. Regional Forest Tract Trails, Lake to Lake Cycling Route and Walking Trail, etc.), the Town has committed to developing a strategic long-term master plan which builds on these existing policies, plans, projects and initiatives.

The plan has been tailored to the wanted and needs of Georgina staff, residents, stakeholders and visitors and is intended to serve as a blueprint for trail and AT facility development community-wide.

The Town of Georgina's Trails and Active Transportation Master Plan is founded on the proposed network and a set of supportive recommendations which were established based on the team's understanding of existing infrastructure including local and regional routes and facilities such as:

- A waterfront route that includes "Share the Road" signage along Lake Drive East;
- Ten (10) paved shoulder segments along key links such as Pollock Rd. between Woodbine Ave. and Metro Rd. S and Pieces of Pefferlaw Rd.;
- Four (4) Multi-use trails both on and off-road, such as the trail found in the Brown Hill Regional Forest Tract;
- Six (6) Regional Forest Tracts including Pefferlaw Tract and Cronsberry Tract; and
- The proposed route alignment for the Georgina portion of the Lake to Lake cycling route and walking trail.

3.4 What Georgina Residents had to Say: Trails & AT Opportunities & Constraints

As presented in Section 1.0, a set of seven (7) objectives were developed to help guide the development of the Trails and AT Master Plan. One of the key study objectives and a cornerstone of provincial and municipal process is the need for ongoing accessible consultation with the public and stakeholders.

The Town of Georgina understands the value of developing a master plan based on local knowledge and input. As such, a detailed consultation strategy was developed which focused on gathering input from those who live and work in the Town as well as those who will ultimately be involved in the plan's implementation.



BUILDING BLOCKS



The strategy identified consultation techniques which engaged members of the public including people of all ages and abilities, harder to reach audiences, Town and Regional staff, local stakeholders, interest groups, trail committees and conservation authorities.

Consultation efforts were undertaken as a collaborative effort between the Trails and AT Study Master Plan study team and the Recreation Facility Needs study team. A summary of the consultation techniques used and the highlights from the input gathered is documented in this chapter.

3.4.1 Phase 1 Consultation Initiatives

Phase 1 consultation activities were intended to:

- Inform the public of the study's background information, draft vision and objectives, as well as route selection criteria; and
- Provided residents with the opportunity to offer input on potential network opportunities and barriers, key destinations and promotion and marketing opportunities using an online questionnaire.

The consultation initiatives included:

- Launch of the Public Awareness Campaign;
- Public Information Centre #1;
- Launch of the on-line questionnaire; and
- Presentation to Council regarding the project progress to date.

Public Awareness Campaign

At the onset of the study the public awareness campaign was launched which included public notices, a study webpage on the Town's website, study promotional business cards, a mobile display board and an on-line questionnaire.

The purpose of the campaign was to notify the public and local stakeholders of the Town of Georgina's Trails and AT Master Plan and to provide them with key background information, additional public engagement opportunities and contact information for study representatives.

The mobile display board was strategically placed at various locations around Town including the Town's office, local libraries, local community centres and the ROC.

BUILDING BLOCKS

The public awareness campaign proved to be successful with approximately 25 people attending the first public information centre, 288 people responding to the on-line questionnaire and approximately 16 people attending the second public information centre.

THE TOWN OF GEORGINA WANTS YOUR INPUT!

Trails and Active Transportation Master Plan Study

The Active Transportation (AT) Master Plan study will be used to support and strengthen existing trails and active transportation facilities Town-wide. The study will ultimately identify on and off-road trails and AT corridors linking the Town's urban and rural communities.

Study Deliverables:

- Trail and AT (Cycling and Walking) Network;
- Trail and AT Design Guidelines and Standards; and
- An Implementation and Funding Strategy & Promotion & Outreach Initiatives.

Recreation Facility Needs Study

The Recreation Facility Needs Study will be undertaken to identify current and future needs for recreation and park facilities (such as arenas, indoor pools, community halls, sports fields, and playgrounds) in the Town of Georgina and to establish a strategy to guide their development.

Study Deliverables:

- An evaluation of current recreation and park facilities and their ability to accommodate demand;
- An assessment of future recreation and park facility needs; and
- An implementation strategy.

How can you Get Involved?

1

Use the QR code below and use your Smart Phone to link to the Online Questionnaire



2

Take a Business Card & Contact the Study Team Members



3

Visit the Town's Facebook Page www.facebook.com/TownofGeorgina



4

Attend Public Events & Information Centres (PICs)

PIC #1: September 2013

PIC #2: November 2013

Check the Town's webpage for exact dates and times as they become available

5

Visit the Town's Webpage for Study Updates & Information www.georgina.ca



6

Fill out a Hard Copy of the Questionnaire available at the Town's Municipal Office



Public Information Centre #1

The first Public Information Centre (PIC) was held on September 26th, 2013 at the Town of Georgina Recreation Outdoor Campus (ROC) as an informal "drop-in open house" session. The date and location were strategically selected to reach out to as many people as possible. It is estimated that the approximately 25 people attended the PIC. The event was promoted through a public notice which was emailed to those who had responded to the online questionnaire and was also posted on the study webpage and published in the local newspaper.

The goal of the PIC was to introduce the public to the project and to hear from them the issues and opportunities related to developing a Trails and AT Master Plan for the Town of Georgina. For the purposes of the PIC, the study team developed a set of display boards (see **Appendix C – Public Engagement Summary**). The open house also provided attendees with a number of interactive boards where participants were able to write their comments directly on the displays.



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This was done to assess / rank the proposed Route Selection Criteria, to gather input on attendees' level of comfort using different trail and AT facility types and to provide input on candidate trail and AT routes and the proposed route network concept as identified by the study team. Two key statements can be made based on the responses which were gathered on two of the three interactive displays.

Table 3.3 – Route Selection Criteria and Level of Comfort Conclusions

Route Selection Criteria Conclusion	Facility Level of Comfort Conclusion
Respondents felt that connectivity/linkages, comfort and safety, as well as the visual / cultural experience were the top three criteria in selecting trail and AT routes.	Respondents were most comfortable using AT facilities such as sidewalks, bike lanes /separated cycle tracks, active transportation pathways and off-road multi-use trails which provide more separation between users and vehicular traffic.

The following graphic illustrates the final results from the route network concept interactive mapping exercise (other responses / graphics are provided in **Appendix C**). Attendees were also encouraged to ask questions and engage in discussions with members of the Study Team.



There were a number of comments provided on the displays. The following are some highlights:

- Need to develop more off-road active transportation trails.
- More separation from traffic on Lake Drive South is needed.
- Reducing the speed limit on Lake Drive will not work as no one obeys the current posted speed limit.



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- Lake Drive needs to be one-way only during the summer season.
- Who is responsible for maintenance of the multi-use trails in Metro Road Tract?
- Is the trail access point in Metro Road Tract open or closed?

On-line Questionnaire

An online questionnaire was developed and collected public input between June 2013 and December 2013. The intent of the questionnaire was to provide residents and local stakeholders with the opportunity to respond to questions regarding the Town of Georgina Trails and Active Transportation Master Plan Study and the Recreation Facility Needs Study (Please note that: this report only presents the results from the Trails and Active Transportation Master Plan Study portion of the questionnaire).

The questionnaire, though not statistically valid, provided the study team with useful information and input regarding local opinions of trails and active transportation within and outside of the Town. The final questionnaire results were based on a total of 288 responses. Some key findings and responses from the questionnaire are identified below:

- Approximately 70% of people (who answered the question) said they drive by themselves 5 to 7 times a week to and from their place of work, school or other most frequent destination. This may be due to the lack of existing opportunities or infrastructure.
- Fitness or recreational was most often the reason why respondents used active transportation within the Town of Georgina. To make trips to school, shops, run errands and visit was the second most popular activity.
- 60.9% of people (who answered the question) reported a commute from home to work, school or most frequent destination of 10km or greater. Typically people are willing to consider an active mode of transportation for utilitarian purposes for trips 10km or less. As such, it may be more difficult to convert people from single occupant vehicle to more sustainable modes.
- 56.8% of people reported that it took them 10 minutes or less to access the nearest major trail or AT facility by foot and 65.9% by bike. With more than half of the respondents able to access a trail or AT facility by foot or bike in less than 10 minutes there is significant opportunity for increased levels of activity.



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- Most respondents (68.9%) indicated that they used past experience or memory to navigate the route and/or find their location when necessary. 26.6% use trail or route signage and 24.3% use their smart phone or GPS device.

Though there are some marketing materials that have been developed at the Regional level there may still be additional opportunities to explore developing these materials at the local level.

- Respondents reported that they preferred walking or cycling on some form of AT facility or trail. Respondents indicated that they were most comfortable using a multi-use trail for their walking or cycling needs. Based on the other responses, respondents seem to be most comfortable engaging in activity on more separated facilities.
- Respondents were generally in support of the Town investing in more trails and AT infrastructure. 89.5% agreed or strongly agreed in additional trail investments and 85.0% agreed or strongly agreed with additional investments in AT infrastructure.
- With regard to reasons why the Town should continue to increase the development of trail and AT facilities, respondents found that it was most important to improve quality of life and health (94.6%), provide increased opportunities for trail use (88.7%) and to connect children and youth to schools (87.8%).
- Respondents provided numerous suggestions locations that the network should connect to. The most common included: the ROC, Lake Drive and key destinations such as schools, parks, beaches, pools, libraries, Civic Center, etc.

Respondents were also given the opportunity to provide additional comments / thoughts on the development of the master plan. There were numerous positive comments; several of these have been quoted below:

“About time! For a community with a lake and natural areas the ability to use them is woefully inadequate. This is long overdue....Can't happen soon enough, I hope you follow through.”

“I am happy the town is studying this and gathering feedback. Hopefully the residences will benefit by a quick implementation...”

“I love this idea. I had heard rumors that the Newmarket trail would eventually connect with Keswick. This would be amazing!”



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“I have lived in Georgina since I was 5 and I am now 33. I have seen many things improve and grow; that is why I chose to raise my family here...Paths that you can take from one end of Keswick to another without cars would be great.”

“The sooner improvements are made the better.”

A full summary of findings from the online questionnaire can be found in **Appendix C**. Overall, it can be confirmed that respondents are supportive of the Town developing in the master plan and investing in trails and AT.

Council Presentation: Project Update

An update on the Trails and AT Master Plan study was provided to the Town Council on November 13th, 2013. Town staff provided a presentation including key study findings (e.g. vision, objectives, route selection criteria, etc.) as well as key background information (e.g. documentation of existing conditions, summary of potential facility types, etc.). The presentation concluded with next steps and a target date for the submission of the Trails and AT Master Plan report. Refer to **Appendix C – Public Engagement Summary** for a copy of the council presentation.

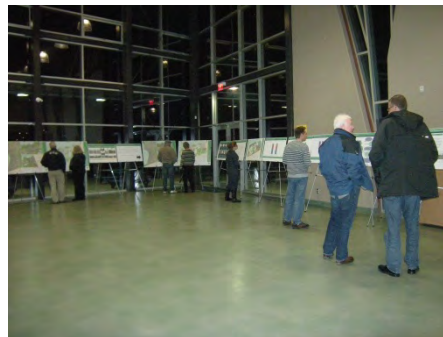
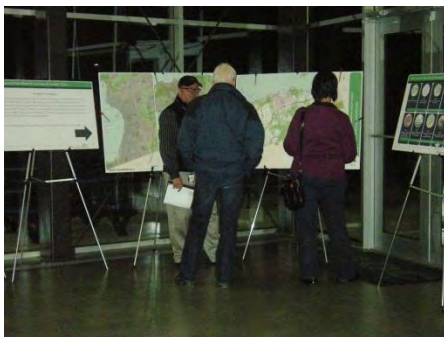
3.4.2 Phase 2 Consultation Initiatives

Phase 2 consultation activities were:

- Intended to give the public the opportunity to provide any final input via the on-line questionnaire;
- Review the draft network concept map;
- Provide input on segment priorities for short-term implementation; and
- Comment on promotional / outreach opportunities in terms of encouraging use of trails and AT facilities more often.

Phase 2 consultation initiatives included:

- Continuation of the Public Awareness Campaign and on-line questionnaire;
- Public Information Centre #2; and
- Final presentation to Council to present the final Town of Georgina Trails and AT Master Plan report.



Public Attendees of Public Information Centre #2 – Source: MMM Group

Public Information Centre #2

The second and final Public Information Centre (PIC) was also held at the Town of Georgina Recreation Outdoor Campus (ROC) as an informal “drop-in open house” session on November 28th, 2013. It is estimated that the approximately 16 people attended the PIC.

The PIC was promoted using the same approach as was used for the first PIC (i.e. development of a public notice which was posted online and in local publications).

The goal of the PIC was to present the draft Trails and AT Network as well as the draft master plan recommendations. The display boards (see **Appendix C – Public Engagement Summary**) prepared for the PIC reiterated the objectives and visions of both the Master Plan study and the Recreation Facility Needs study, provided information on potential trail and facility users, select results from on-line questionnaire as of November 18th, 2013 and the route selection criteria. Other displays specific to PIC #2 included a step by step summary of how the network was developed, a map of the proposed Trails and Active Transportation Network and proposed trail and AT promotion and outreach programs and master plan recommendations for consideration by the study team.

As was the case for the first PIC, the study team prepared a number of interactive display boards which were used to gather input from the public. The interactive display boards asked participants to:

- Provide comments directly on the draft trails and AT network including missing links or alternative facility types.
- Identify the top three priorities for the implementation of the network; and



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- Provide their thoughts on the importance of different promotion and outreach initiatives.

A full summary of the comments provided on each of these interactive display boards is provided in **Appendix C**. The following table lists some highlights from the comments written on the trails and AT network interactive display boards.

Table 3.4 – Comments from Interactive Display Boards (PIC #2)

Comments regarding Potential Facility Types and Missing Links	Comments regarding the Ranking of Potential Routes
<ul style="list-style-type: none">• Improve bike access along the Queensway.• Need to restore access on Morton Avenue.• The drainage ditch connecting to Verona Crescent needs to be made a formal access route.• Lake Drive should be a one-way road (very common comment).• Curke Street should be investigated in Sutton.• Consider implementing dedicated bike lane along Ravenshoe Road to Brown Hill Tract.• Explore connection between Old Homestead Road and The ROC.• Consider connection to Metro Road Tract and Brown Hill Tract via an off-road trail in partnership with York Region Forestry.• High Street is very busy. It is safest to ride on local streets north east of this location.• The proposed paved shoulder on Lakeridge Road / Durham Road 23 should connect to Durham trails.	<p>Respondents indicated that segments along the waterfront should be priorities across the entire Town for short-term implementation (0-5 years). Lake Drive, Ravenshoe Road, The Queensway North / South, Duclos Point Road / Park Road (connection into Duclos Point) and Lakeridge Road / Durham Road 23 were all identified as priorities.</p>

As noted above, attendees were also presented draft trails and AT recommendations and information on how the master plan will be built, used safely, promoted, enforced and evaluated. Attendees were given the opportunity to provide their input on promotional / outreach initiatives that they think would encourage them to use active transportation and recreation facilities more often. The following can be concluded from these findings:



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- Overall, promotional and outreach initiatives are very important in encouraging residents and visitors to use trails or AT facilities more often.
- However, those initiatives that ranked the highest include the use of public events, promotional materials available at local businesses, opportunities to provide feedback during the implementation of the Master Plan and enhanced mapping and route information in a variety of formats.
- Access to educational materials regarding safe and proper use of trails and AT facilities, opportunities to take part in organized walking or cycling programs and regular communication with enforcement officials regarding the enjoyment of the trails and active transportation network followed closely behind.

A number of comments, questions and suggestions were provided by PIC attendees at the second PIC regarding the Draft Trail and AT Master Plan. A summary of these comments is provided in **Appendix C**.

The above comments were used to help finalize the trails and AT facility network map, identify priorities for short-term (0 to 5 years) implementation and refine the phasing plan for the Town of Georgina's Trails and AT Master Plan. The comments received were also used help identify and / or refine potential master plan recommendations.

Public Review of Draft Report January 2014

The draft Trails and Active Transportation Master Plan was provided to Council on January 15th, 2014 for their review and also posted on the Town's website for public review. Hard copies of the draft Master Plan were also made available for public review at the Town's offices.

Final Presentation to Council March 2014

The final presentation to Council to present the Town of Georgina Trails and AT Master Plan report is slated to occur in March 2014.



4.0 THE TRAILS & AT NETWORK

4.1 The Network Development Approach

The information presented in this section documents the steps undertaken over the course of the study to develop the Town of Georgina's proposed Trails and Active Transportation (AT) network.

4.1.1 How was the Network Developed?

An eight-step network development approach was used to establish the system of proposed Trails and AT linkages Town-wide. The approach was based on an iterative planning process which has been refined through the development of a number of Trails and AT related master plans of a similar scope and scale and adapted to meet the needs of the Town of Georgina.

Table 4.1 is an overview of the eight-steps which were used to develop Georgina's Trails and AT Network.



Table 4.1 – Eight-Step Trails and AT Network Development Process

Process Step	Description of Process Step
1. Collect & Assemble Background Information	<ul style="list-style-type: none">• Consolidate and digitally map previously planned trail and AT facilities in the Town of Georgina based on GIS information provided by the Town of Georgina and other relevant background information gathered from previously completed studies (e.g. the York Region Lake to Lake Cycling Route & Walking Trail and the Pedestrian and Cycling Master Plan).• Review secondary plans and development plans provided by local Municipal Staff (e.g. Sutton / Jackson's Point Secondary Plan, Open Space Management Plan, etc.).• Review Town of Georgina Environmental Assessment for the proposed Maskinonge River Pedestrian Bridge.
2. Develop Route Selection Criteria	<ul style="list-style-type: none">• A set of qualitative principles were developed to guide the selection of proposed routes. The principles were reviewed with the study team and presented to the public at the first PIC. Based on the comments received the criteria were refined and finalized.
3. Select Candidate Routes / Route Alignment	<p>Candidate routes were mapped and refined based on the following:</p> <ul style="list-style-type: none">• Consolidated base mapping;• Route selection criteria;• Consultation with the Steering Committee;• Expertise of the Study Team;• Consultation with the public; and• Desktop analysis using the Town's and York Region's GIS database and aerial imagery provided by the Town. <p>*It is important to note that the Maskinonge River Pedestrian Bridge Class Environmental Assessment preferred alignment was reviewed and confirmed using the route selection criteria and was incorporated into the candidate route network. The findings of this assessment support the preferred alignment identified.</p>
4. Undertake Field Investigation	<ul style="list-style-type: none">• The study team conducted field investigations throughout the Town to examine candidate routes and collect additional information, including photographs and measurements that helped to inform the development of the trails and AT network concept.



THE TRAILS & AT NETWORK



Table 4.1 – Eight-Step Trails and AT Network Development Process

Process Step	Description of Process Step
5. Prepare Draft Routing (Select Alignments & Differentiate between on and off-road facilities)	<ul style="list-style-type: none">Using the route selection criteria, information collected in the field combined with the technical expertise of the study team, plus input from public, Stakeholders and Public Agencies as well as the Steering Committee the candidate route network was refined and the proposed trail and AT routes, both on and off-road, were selected.
6. Determine Draft Facility Types	<p>For each route an appropriate facility type was suggested by considering a number of factors such as:</p> <ul style="list-style-type: none">Geographic location (urban vs. rural);Facility types recommended in other previously completed plans and studies conducted within the Town or RegionRoadway characteristics such as cross sections, traffic volume and speed, sight lines, truck volumes, etc.Observations made by the study team were then balanced by the comments received from the Steering Committee and the public.
7. Determine Network Priorities (Implementation Plan)	<ul style="list-style-type: none">The Implementation Plan was developed to respond to priorities suggested by MMM Group as well as those identified by the Steering Committee and the public.Note that after the Master Plan is adopted and as part of the implementation of route segments over the horizon of the plan, a more detailed assessment will be undertaken to confirm the route and facility types (refer to the 5-step implementation process outlined in Chapter 6).
8. Apply Unit Costing & prepare High-level Network Costs	<ul style="list-style-type: none">The recommended network and facility types were used at the master plan level to develop an order of magnitude cost estimate for the implementation of the network.Costing was prepared for full build-out of the network but has also been organized based on short, medium and long-term phased investments consistent with the implementation schedule.



4.1.2 Assessing Existing Trail and AT Facilities


An initial step in the development of the Trails and AT network was the documentation and assessment of the Town’s existing on and off-road trails and AT facilities. This process helped the study team identify missing trail and AT links and bridge missing connections to urban and rural areas in order to achieve the study’s goals and objectives outlined in **Section 1.4**.

Maps 4.1 and **4.2** illustrate the existing trail and AT facilities found within the Town of Georgina including:

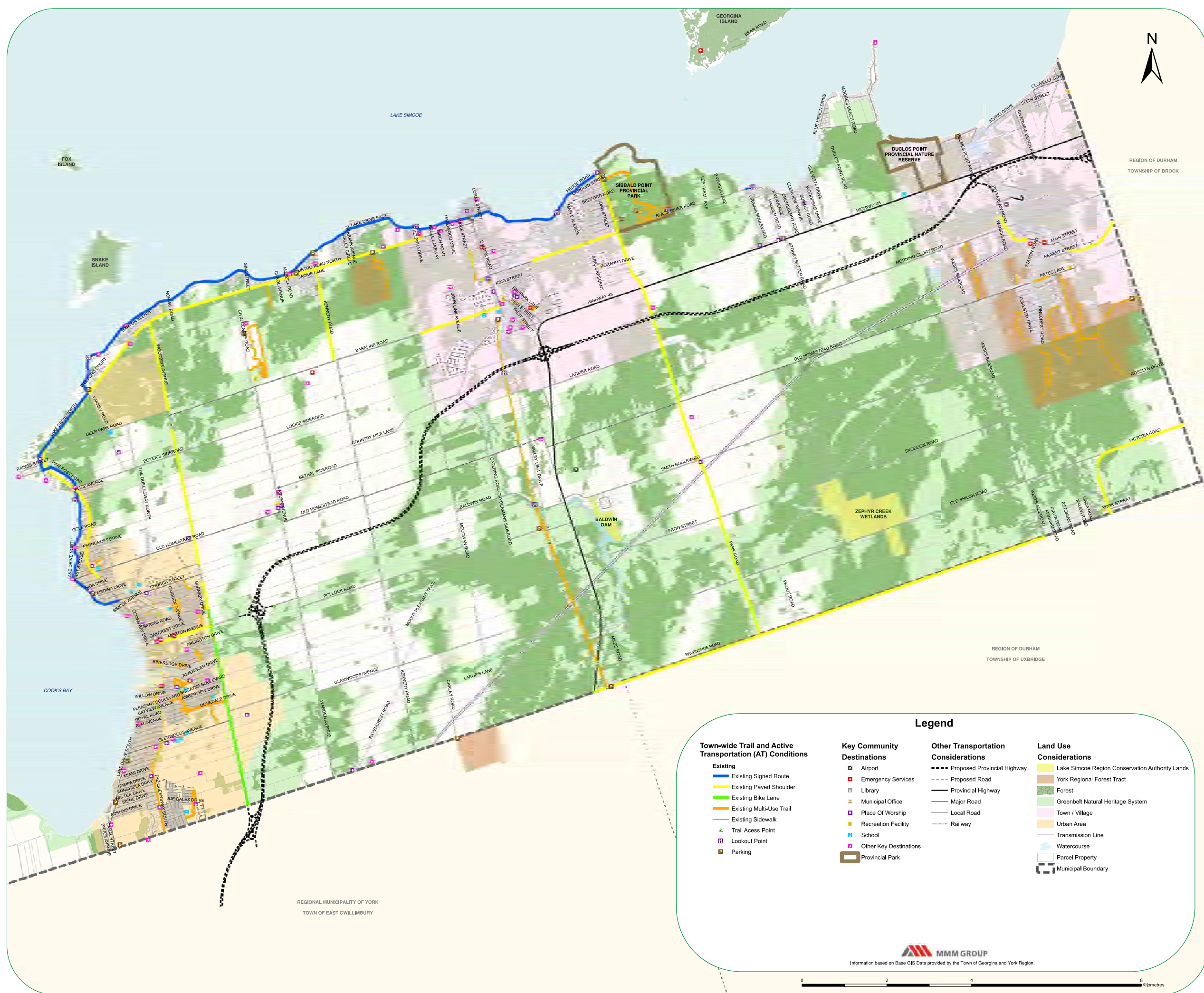
- Roads with existing signed routes;
- Roads with existing paved shoulders,
- Roads with existing bike lanes;
- Existing off-road multi-use trails; and
- Proposed on and off-road facilities as noted in Town documents and other planning documents such as the York Region Pedestrian and Cycling Master Plan (2008) and the Lake to Lake Cycling Route and Walking Trail Feasibility Design Study (2012).

The location of the existing cycling facilities illustrated on **Maps 4.1** and **4.2** were refined and confirmed based on extensive field investigations undertaken by the study team. **Table 4.2** is a summary of the existing on and off-road trail and AT facilities found within the Town of Georgina.

Table 4.2 – Summary of Existing On and Off-Road Trail and AT Facilities within the Town of Georgina

Facility	Description	Example
Existing Signed Routes	The Town has several kilometres of existing facilities along Lake Drive and Metro Road. These facilities provide connections to key community destinations (e.g. public beaches, Jackson’s Point, Sutton, etc.).	 Existing Signed Route on Hedge Rd.

MAP 4.1
EXISTING CONDITIONS BY FACILITY TYPES
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY



Town-wide Trail and Active Transportation (AT) Conditions

- Existing**
- Existing Signed Route
 - Existing Paved Shoulder
 - Existing Bike Lane
 - Existing Multi-Use Trail
 - Existing Sidewalk
 - Trail Access Point
 - Lookout Point
 - Parking

Key Community Destinations

- Airport
- Emergency Services
- Library
- Municipal Office
- Place Of Worship
- Recreation Facility
- School
- Other Key Destinations
- Provincial Park

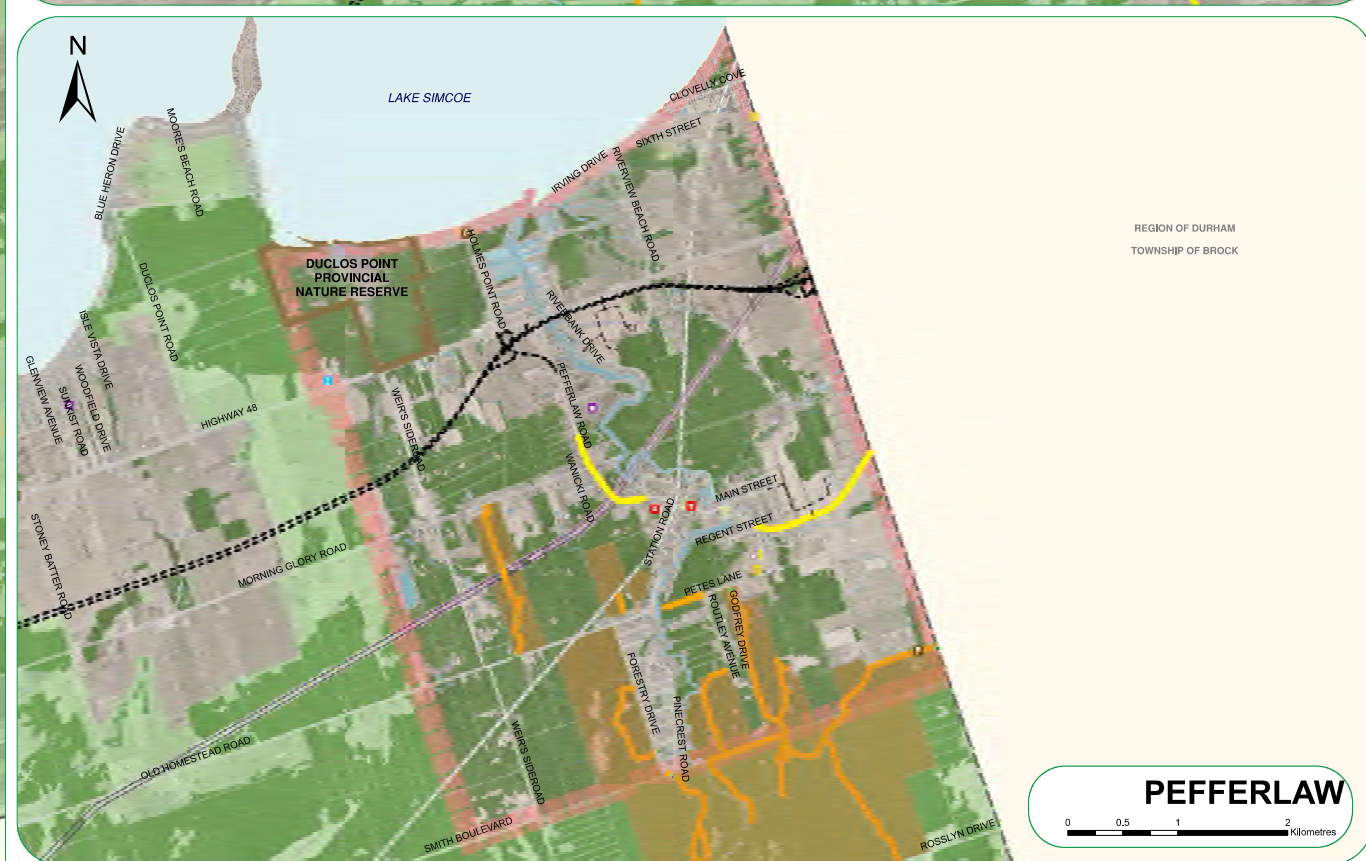
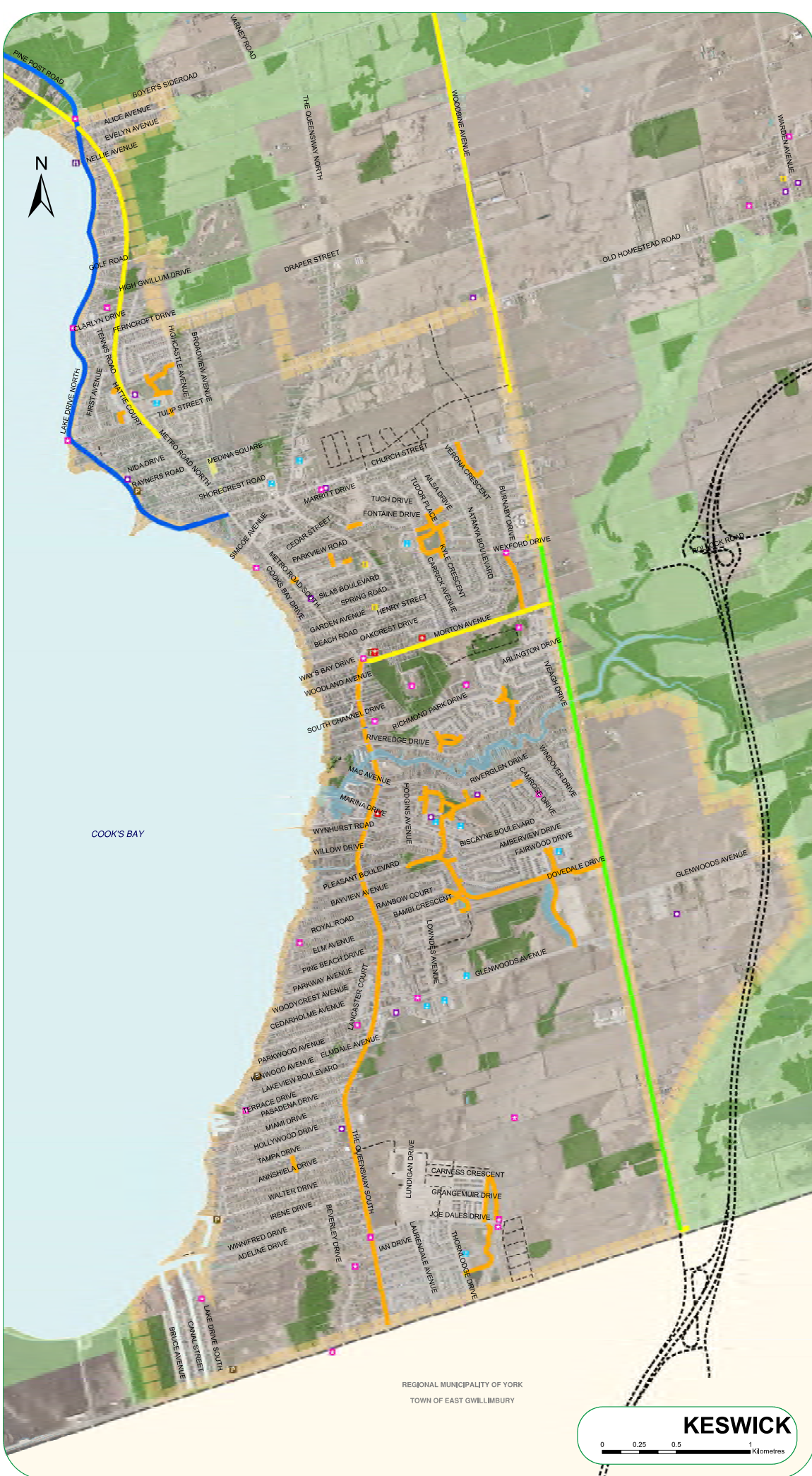
Legend

Other Transportation Considerations

- Proposed Provincial Highway
- Proposed Road
- Provincial Highway
- Major Road
- Local Road
- Railway

Land Use Considerations

- Lake Simcoe Region Conservation Authority Lands
- York Regional Forest Tract
- Forest
- Greenbelt Natural Heritage System
- Town / Village
- Urban Area
- Transmission Line
- Watercourse
- Parcel Property
- Municipal Boundary



Town-wide Trail and Active Transportation (AT) Conditions

- Existing Signed Route
- Existing Paved Shoulder
- Existing Bike Lane
- Existing Multi-Use Trail
- Existing Sidewalk
- Trail Access Point
- Lookout Point
- Parking

Key Community Destinations

- Airport
- Emergency Services
- Library
- Municipal Office
- Place Of Worship
- Recreation Facility
- School
- Other Key Destinations
- Provincial Park

Other Transportation Considerations

- Proposed Provincial Highway
- Proposed Road
- Railway

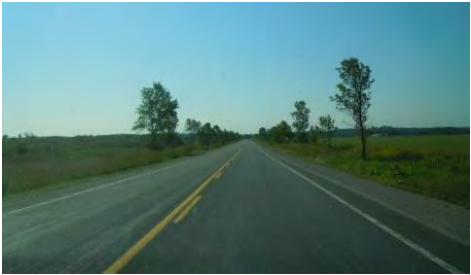


Land Use Considerations

- Lake Simcoe Region Conservation Authority Lands
- York Regional Forest Tract
- Forest
- Greenbelt Natural Heritage System
- Town / Village
- Transmission Line
- Watercourse
- Parcel Property
- Urban Area

Information based on Base GIS Data provided by the Town of Georgina and York Region, 2009 Orthophotography.



Table 4.2 – Summary of Existing On and Off-Road Trail and AT Facilities within the Town of Georgina

Facility	Description	Example
Existing Paved Shoulders	Several kilometres of facilities have been implemented throughout the Town, including on Regional Roads and Provincial Highways (e.g. Ravenshoe Road, Highway 48, etc.).	 <p>Existing Paved Shoulders on Park Rd.</p>
Existing Bike Lanes	The Region of York has several kilometres of existing facilities in key locations throughout the Town (e.g. Woodbine Avenue). This facility provides a designated space for cyclists, separate from motor vehicle traffic.	 <p>Existing Bike Lane on Woodbine Ave.</p>
Existing Multi-Use Trails	There are approximately 53 kilometres of existing facilities throughout the Town that are owned and maintained by the Town of Georgina, York Region and the Lake Simcoe Region Conservation Authority and Province of Ontario (e.g. Sutton-Zephyr Rail Trail). These multi-use trails provide connections to key destinations including but not limited to the ROC and York Region Forest Tracts. The surface type and design of trails vary depending in geographic location.	 <p>Existing Multi-use Trail north of Riveredge Dr.</p>



4.1.3 Preparing a Candidate Route Network

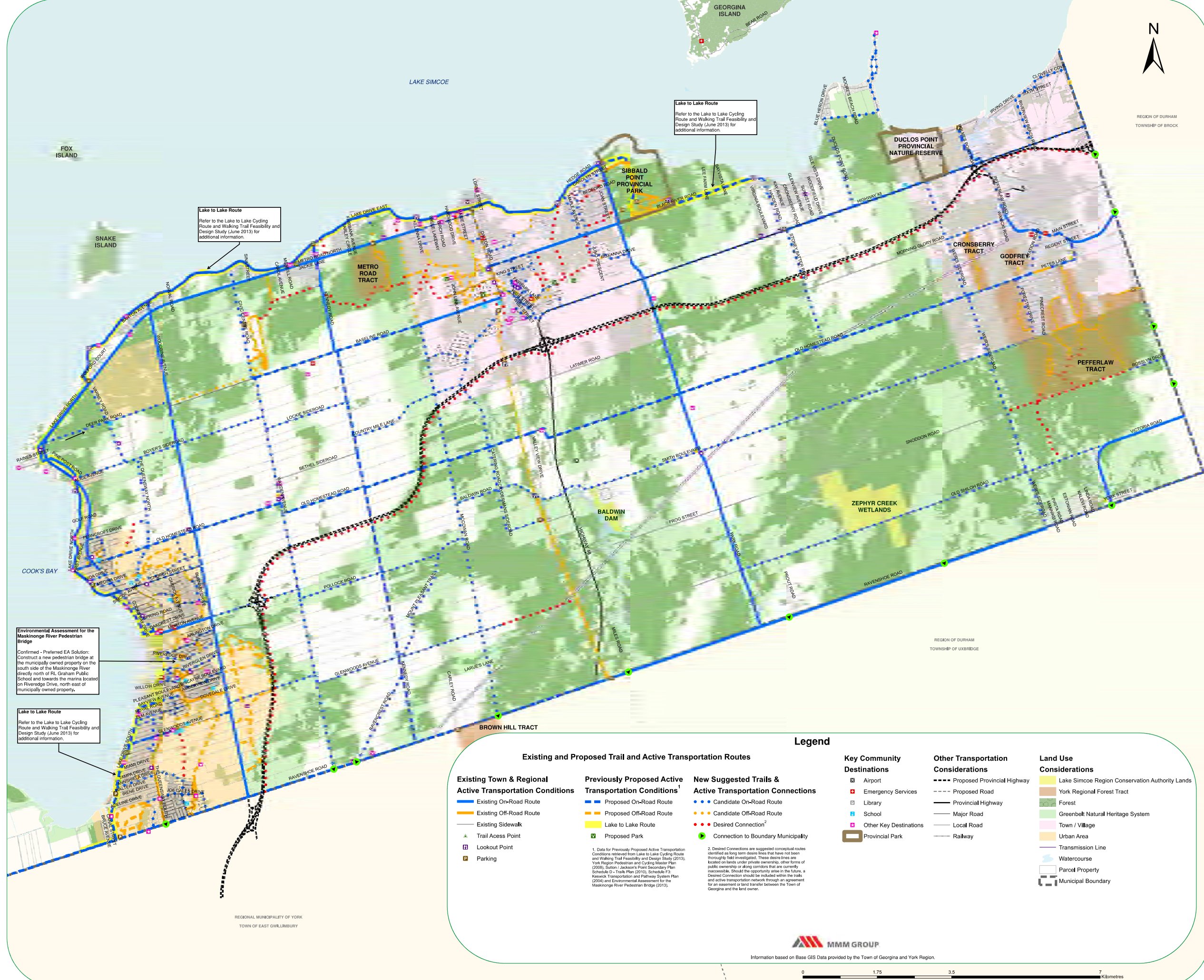
Following the documentation of existing conditions and the identification of route opportunities and barriers and building upon public input, the study team undertook an exercise to identify potential routes which could form part of the Trails and AT network. The Trails and AT network development also took into consideration the Environmental Assessment for the proposed Maskinonge River Pedestrian Bridge. MMM reviewed this EA in the context of the Trails and AT network route selection approach and criteria and in our opinion the location of the proposed bridge is appropriate and consistent with good trail planning and mitigates an existing major barrier in the recreational trail network in Georgina. In addition, area secondary plans and development plans provided by the Town were reviewed, including the Sutton / Jackson's Point Secondary Plan and the Open Space Management Plan.

The routes that were identified linked to form a network of candidate routes including:

- Direct east-west and north-south linkages providing connections through the Town;
- Connections to surrounding municipalities based on routes identified in active transportation related planning documents;
- Off-road linkages to existing trail facilities;
- Connections to key destinations including but not limited to local schools, arenas, municipal offices, community centres, etc.;
- Local neighbourhood connections providing alternative routes to the north-south and east-west linkages; and
- Connections to other modes of transportation such as existing bus routes along Woodbine Avenue, The Queensway and Metro Road.
- Desired Connections that are suggested conceptual routes identified as long term desire lines which have not been thoroughly field investigated. These desire connections are located on lands under private ownership, other forms of public ownership or along corridors that are currently inaccessible. Should the opportunity arise in the future, a Desired Connection should be included within the trails and active transportation network through an agreement for an easement or land transfer between the Town of Georgina and the land owner.

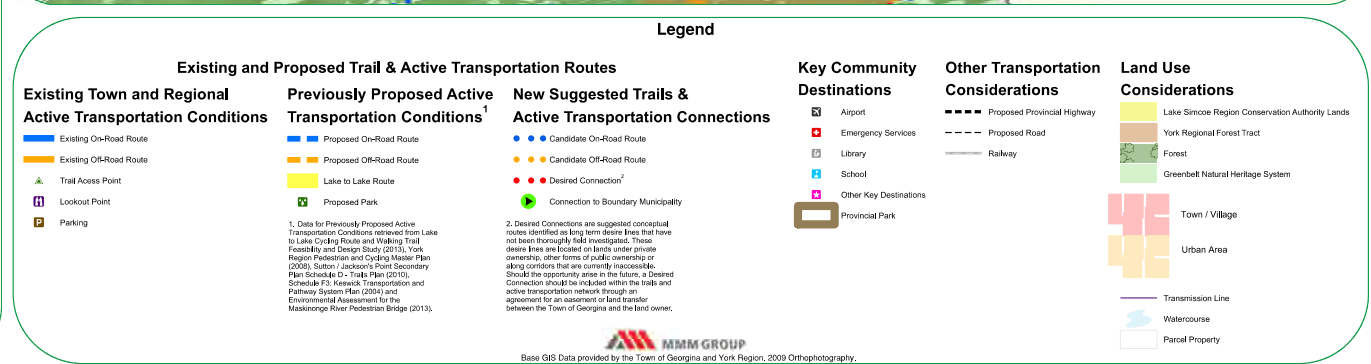
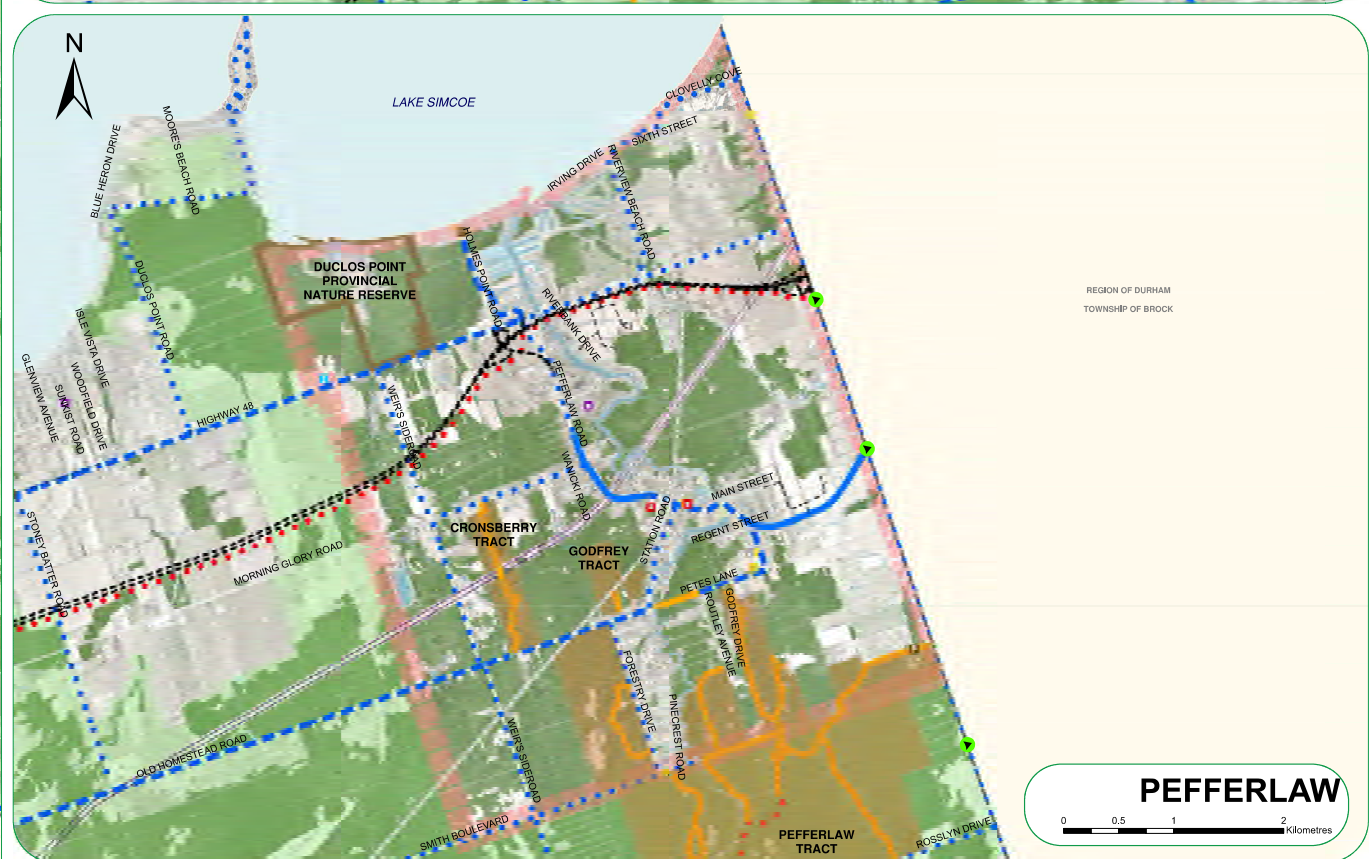
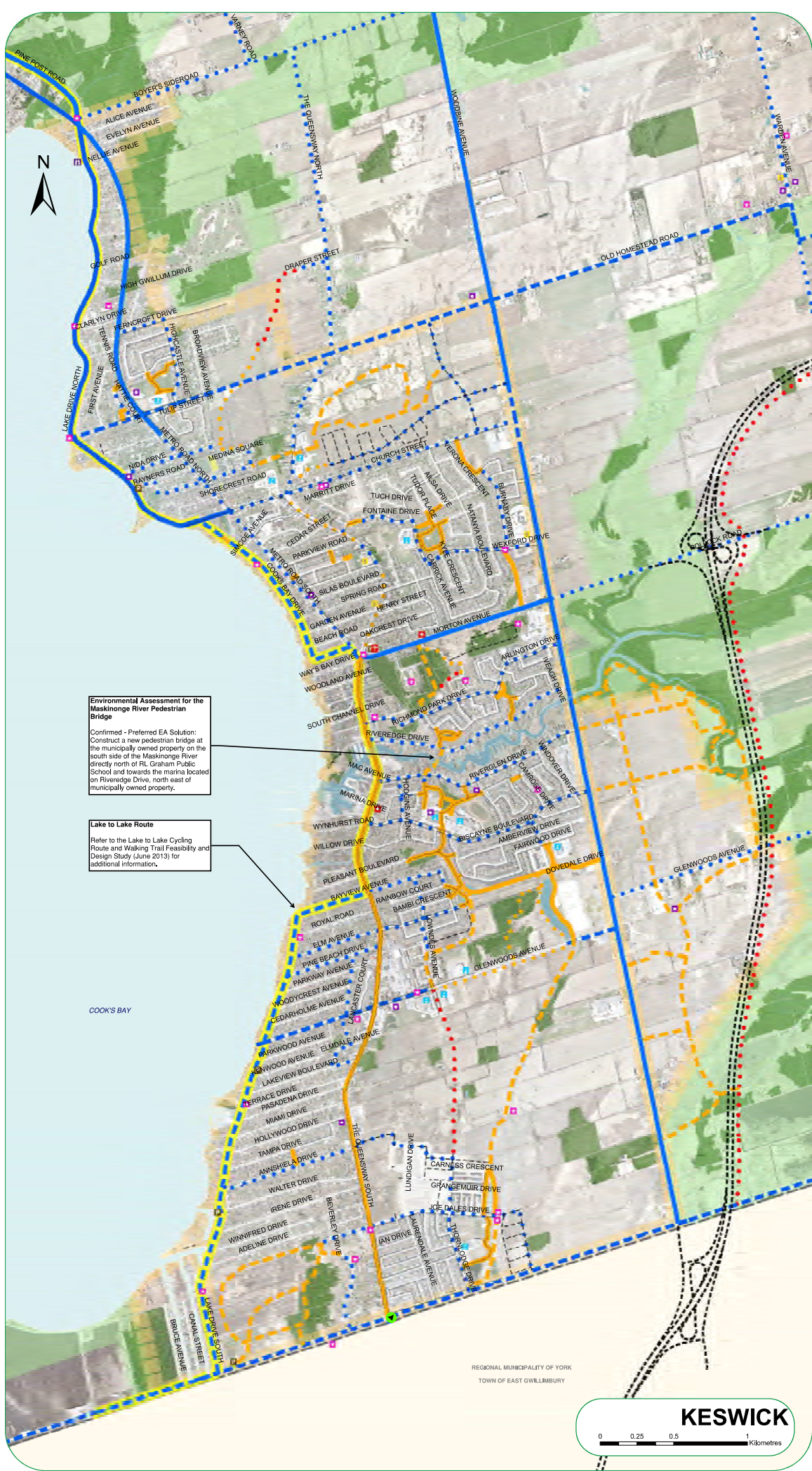
The candidate route network was then refined using the confirmed route selection criteria is illustrated on **Maps 4.3** and **4.4**.

MAP 4.3
CANDIDATE TRAILS & AT ROUTES
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY



FINAL MAY 2014

CANDIDATE TRAILS & AT ROUTES TOWN OF GEORGINA MAP 4.4 TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY





THE TRAILS & AT NETWORK



4.1.4 Selecting the Routes – Applying the Route Selection Criteria

One of the key inputs to the development of the recommended trails and AT network was the application of a set of Route Selection Criteria. The criteria were developed by the Study Team and reviewed with Town Staff, members of the Steering Committee, local stakeholders and members of the public at initial stages of the study. Using the Candidate Route Network established by the study team, the route selection criteria were used to refine candidate routes to identify routes which made up the proposed route network concept.

The Route Selection Criteria can be used when undertaking a more detailed route feasibility assessment on a route-by-route basis, and also when any future network routing changes are being considered. **Table 4.3** outlines the route selection criteria and a description of each.

Table 4.3– Town of Georgina Trails and AT Route Selection Criteria

Criteria	Description
Visible	Trail and AT routes should be a visible component of the transportation and recreation system.
Connected / Linked	The Trails and AT network should link the Town's urban and rural communities, areas of cultural and natural significance and key destinations in addition to providing connection to surrounding municipalities. Routes should be easily accessible from the Town's communities and link to the Region's existing and proposed pedestrian and cycling network.
Accessible	Where feasible, off-road routes should be designed to meet applicable legislation and standards. It is recognized however that not all off-road routes will be accessible in all locations. Off-road routes should be appropriately signed to communicate the level of accessibility.
Integrated	The Trails and AT network should be integrated with other modes of transportation (e.g. transit) and recognize existing designated snowmobile and ATV routes. The route will provide access to existing and future planned transportation hubs and facilitate utilitarian travel.
Diverse	The network should provide a diverse and balanced on and off-road trails and AT experience throughout the Town. The system should appeal to a range of user abilities and interests.
Visual / Cultural Experience	Routes should take advantage of attractive and scenic areas, views and vistas. Routes should provide users with the opportunity to experience the cultural and natural heritage found throughout the Town.



Table 4.3– Town of Georgina Trails and AT Route Selection Criteria

Criteria	Description
Comfort & Safety	Reducing risks to users and providing comfortable facilities will be a key consideration when selecting routes for the network. The decreased perception of risk can increase confidence in users.
Context-Sensitive Design	Facility design for individual routes should follow widely accepted guidelines (such as Ontario Traffic Manual (OTM) Book 18: Cycling Facilities and OTM Book 15: Pedestrian Crossing Facilities), but may also be modified to respond to the immediate surroundings.
Sustainability	Sustainability will be a key consideration in the alignment, design and selection of materials for on and off-road Trail and AT facility types.
Cost-Effectiveness	The cost to implement and maintain the trails and AT network and supporting facilities / amenities under the Town's jurisdiction should be phased over time and designed to be affordable and appropriate in scale for the Town. New trail and AT infrastructure in growth and new development areas should be developer funded and include the cost of connections to existing boundary trail and AT infrastructure. User safety will not be compromised in the interest of cost.

Using the Route Selection Criteria as a Tool

As the Town of Georgina proceeds with the implementation of the Trails and AT network there may be some scenarios where alternate routes, not originally identified, prove to be a more feasible alignment. There may also be scenarios where opportunities offered by unopened road allowances, hydro rights-of-way, abandoned rail corridors, open space, future roadway improvements, partnerships and funding initiatives become available. In these scenarios, the Route Selection Criteria can be a valuable tool to evaluate these routes. Implementation of the proposed network should be flexible and adapt to new information and opportunities. This may result in route and facility type changes from what is presented in this master plan.

A Route Rationale Tool was developed to assist the Town in evaluating potential routes which may form future segments of the network. The tool provides detailed considerations that are intended to guide the evaluation of the route against individual criteria. When a potential route is under assessment, a score of 0 – 3 is assigned for each criterion depending on how well it is fulfilled. The ranking scheme is described in **Table 4.4**.



THE TRAILS & AT NETWORK

The overall score for the route is the sum of the criterion scores divided by the number of applicable criteria used to evaluate the route. An overall score of 2 or higher indicates that the route is considered suitable for inclusion within the Trails and AT network.

Table 4.4– Proposed Route Rationale Scoring Methodology

Score	Rationale	High
3	The route categorically fulfils the criterion (i.e., all consideration items are fulfilled).	
2	The route generally fulfils the criterion (i.e., most of the considerations are fulfilled).	
1	The route generally does not fulfil the criterion (i.e., less than half of the considerations are fulfilled).	
0	The route does not fulfill the criterion at all (i.e., none of the considerations are fulfilled).	
N/A	This criterion is not applicable to the route being evaluated.	Low

The criteria have been further defined based on current best practices as well as a set of Route Selection Guidelines which was developed for the Ontario Ministry of Transportation. **Table 4.5** outlines the additional descriptions / consideration for each of the criteria to be used when scoring the route.

Table 4.5– Town of Georgina Trail and AT Route Rationale Considerations

Guideline	Considerations for Scoring
Visible	<ul style="list-style-type: none"> The route utilizes established or successful routes and is popular among pedestrians and cyclists; and The route is well marked and / or has easily recognizable permanent landmarks (natural and manmade).
Connected / Linked	<ul style="list-style-type: none"> The route connects significant population centres (e.g. adjacent municipalities, rural towns, urban centres); The route links significant destinations and attractions (e.g. local community centres, schools, historical sites, conservation areas, etc.) The route has been identified by pedestrians and cyclists as an important feature and / or existing



Table 4.5– Town of Georgina Trail and AT Route Rationale Considerations

Guideline	Considerations for Scoring
	<p>connection;</p> <ul style="list-style-type: none"> Route provides logical and appropriate crossings of major physical barriers such as railways, major highways, lakes and rivers; and Facilities to accommodate pedestrians and cyclists across barriers already exist or can be provided.
Accessible	<ul style="list-style-type: none"> The off-road route has sufficient space to develop an off-road trail or cycling facility that meets the requirements of the AODA.
Integrated	<ul style="list-style-type: none"> The route connects cyclists and pedestrians to transportation hubs and transit facilities (e.g. bus stops, bus terminals, GO stations, etc.)
Diverse	<ul style="list-style-type: none"> The route location and facility addresses the needs of the type and skill level of anticipated users. The route provides users with on and off-road links and connections.
Visual / Cultural Experience	<ul style="list-style-type: none"> The route provides direct access to key natural features and destinations throughout the Town including but not limited to: vistas and views from trails / routes, visual points of interest, areas with significant cultural / historical landscapes and views; and The route provides direct linkages to community destinations and helps to promote tourism and economic development.
Safety / Comfort	<ul style="list-style-type: none"> The route should have a riding surface which provides riders with a higher sense of comfort while using the route (e.g. paved or granular surface); and The route provides the rider with a sense of safety including route lighting, informational signage, the presence of a designated cycling facility, and access to key trail and active transportation amenities.
Context Sensitive	<ul style="list-style-type: none"> The route has sufficient space to develop a trail or active transportation facility that is consistent with the characteristics of the right-of-way (i.e. traffic volume, speed, truck volume, topography and sightlines); and Route takes into consideration all potential land use issues and is cognisant of the EA process and requirements set out in the Municipal Class EA Act.



THE TRAILS & AT NETWORK



Table 4.5– Town of Georgina Trail and AT Route Rationale Considerations

Guideline	Considerations for Scoring
Sustainable	<ul style="list-style-type: none">• The route follows and should be aligned to make the best use of the existing facilities where appropriate; or• The benefits associated with implementing the proposed trail or active transportation facility justifies the cost.
Cost-Effective	<ul style="list-style-type: none">• The route and facility should be implemented along the route at a reasonable cost without unnecessarily compromising active transportation facility or trail; and• The route should be well maintained through existing or new operations and maintenance agreements.
Attractive/ Interesting	<ul style="list-style-type: none">• The route provides direct access to key natural features and destinations throughout the Town including but not limited to: vistas and views from trails / routes, visual points of interest, areas with significant cultural / historical landscapes and views; and• The route provides direct linkages to community destinations and helps to promote tourism and economic development.

Table 4.6 is a proposed template which may be used as a tool by the Town of Georgina to assess a route. The development of the Town's Trail and Active Transportation Master Plan went through a more detailed, iterative and public review process, and therefore route segments were not scored.

That said, this tool provides a very good approach for documenting the assessment of new routes or modifications to the proposed plan in the future. This documentation approach is also recommended as part of a risk management strategy to document how new or revised routes were assessed.

The Trails and AT Master Plan in this Master Plan report documents the assessment and basis for the network recommended in this plan. The Route Rationalization Tool should be used by all staff involved in the design and implementation of the network to ensure consistency.



Table 4.6– Town of Georgina Route Rationalization Tool

Route Description			
Route Name:			
Route Start Point (nearest roadway, intersection, etc.):			
Route End Point (nearest roadway, intersection, etc.):			
Evaluation Completed by (name and position / title):			
Date of Evaluation:			
Criteria	Score (0 – 3) or N/A	Rationale for Score Entered	Roles and Responsibilities
Visible			
Connected / Linked			
Accessible			
Integrated			
Diverse			
Visual / Cultural Experience			
Safety / Comfort			
Context Sensitive			
Sustainable			
Cost-Effective			
Attractive / Interesting			

A. Subtotal*	
B. Number of Criteria with N/A Responses	
C. Number of Rows score of 0 – 3 entered	
D. Overall Route Score**	

Please note that should this be developed into a Tool used by the Town. Additional reformatting should be considered including the provision of a space to provide additional notes and key considerations. This could be formatted as a text box on the back of the page.

* Sum of all scores
 ** Row A divided by Row



THE TRAILS & AT NETWORK



Assessing the suitability of a candidate route involves adding the individual scores and then dividing that number by the number of scored criteria (criteria which are N/A will not be considered part of the evaluation of this particular route). By way of example, given that there are 11 criteria, if each is scored 2 the total would be 22 (i.e. $11 \times 2 = 22$). Divide the resulting value (e.g. 22) by the number of criteria scored (i.e. $22/11 = 2$) which gives a final score of 2. The final score for each route will range between 0 (low suitability) and 3 (high suitability) as part of the trails network. Please refer to the **Figure 4.1 - Suitability Index** (below) to compare a route's score to the level of suitability.

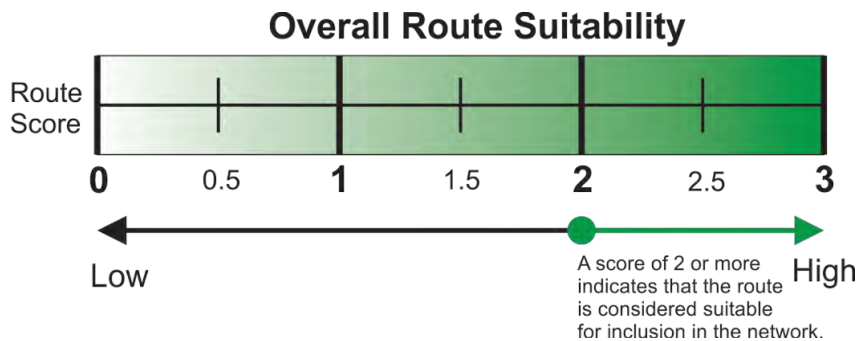


Figure 4.1 – Suitability Index for Candidate Trail Routes
Source: MMM Group

Recommendation 4.1:

Consider using the Route Rationalization Tool when future updates or alterations are made to the trails and AT network or when opportunities arise.

4.2 A Hierarchy of Trail & AT Routes

The Candidate Network illustrates a high level system of on and off-road routes and linkages found throughout the Town. The system also provides additional detail regarding the potential hierarchy of routes. The hierarchy of trail and AT routes identified for the master plan consists of the following four systems:

- **The Primary System**– Major north-south and east-west connections;
- **The Secondary System**– Local neighbourhood routes parallel to the Primary System;
- **Off-road Trail System**; and
- **Desired Connections**.



The hierarchy was developed to establish a better understanding of route objectives and ultimately helped the study team in the selection of facility types that suit both the existing roadway characteristics as well as the intent of the linkage. A description of each system is presented in the tables below:

The Primary System

Route Description:
The primary system should typically consist of trail and AT routes designed to provide direct north-south and east-west linking the Town’s rural and urban communities.
Route Objectives:
The route provides direct connections between major nodes, transit hubs and communities including but not limited to commercial, employment, industrial and serves as the “backbone” of the network.
Potential Users:
Intended for use primarily by utilitarian cyclists and active transportation users but could also be used as direct connections for recreational cyclists.
Application & Facility Types:
Primarily along Regional, arterial and collector roads. Facility Types could include: <ul style="list-style-type: none">• Bike Lanes• Multi-use Pathways outside of the Road Right-of-Way• Paved Shoulders
Example of Potential Application:

Woodbine Avenue, Town of Georgina Source: MMM Group



THE TRAILS & AT NETWORK

The Secondary System

Route Description:

The secondary system should typically consist of parallel routes to the primary system and provide alternate trail and AT connections on local roadways.

Route Objectives:

The route provides connections between local destinations throughout local neighbourhood and communities e.g. schools, local stores, commercial nodes, arenas, parks and community centres and “feed” into the primary “spine” system.

Potential Users:

Intended for use by utilitarian as well as recreational users. These routes prove to be more comfortable / safe alternatives for children travelling to school or those who prefer a quieter AT environment.

Application & Facility Types:

Quieter and Local Residential Roads. Facility Types could include:

- Bike Lanes
- Signed Routes on local residential streets some with wide burn lanes or edge lines
- Paved shoulders


Example of Potential Application:



Riverglen Drive, Town of Georgina
Source: MMM Group



Off-Road Trail System

Route Description:
The off-road trail system should typically consist of those alternate routes which utilize existing park / open space and provide alternate off-road trail and AT connections.
Route Objectives:
The route provides off-road trail and AT connections through park and open spaces within the Town. They are considered alternative routes to the primary and secondary system and in some cases provide direct connections to schools and community centres.
Potential Users:
Intended for use by utilitarian as well as recreational AT users. These routes prove to be more comfortable / safe alternatives for children travelling to school or those who prefer an off-road AT environment.
Application & Facility Types:
Existing park space and open spaces. Facility Types could include: <ul style="list-style-type: none">Off-road Multi-use Trails
Example of Potential Application:

South of O'Dell Lane at Metro Road North, Town of Georgina Source: MMM Group



THE TRAILS & AT NETWORK

Desired Connections

Route Description:

Desire lines indicate routes which are proposed to be explored in the future as development occurs throughout the Town. These routes would typically make up and / or be extensions of the secondary system and in some cases the primary system

Route Objectives:

The routes would provide an extension to the proposed primary and secondary system in the future to facilitate movement into and out of new development areas or access to local green space.

Potential Users:

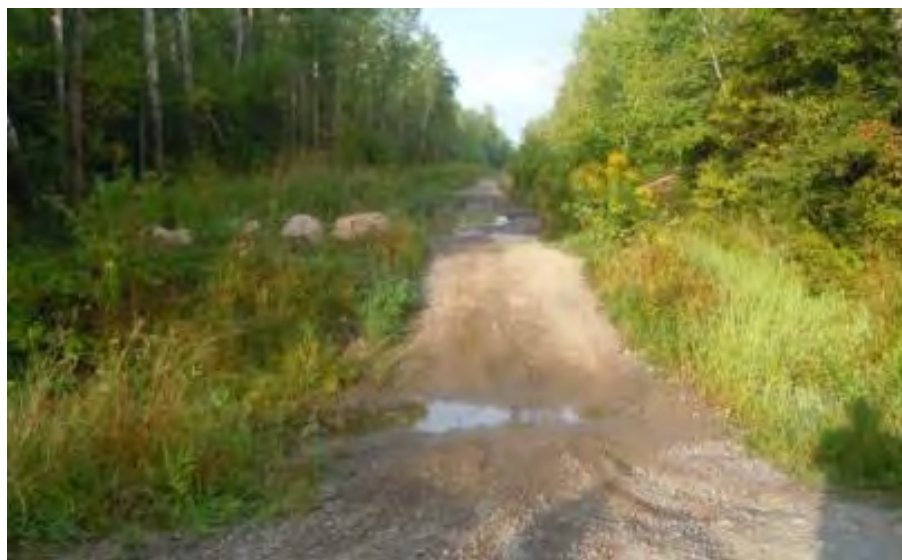
Intended for use by utilitarian as well as recreational cyclists and pedestrians. The users will be based on the confirmed route alignment and proposed facility type as it is developed.

Application and Facility Types

New development areas, hydro corridors and / or railway right-of-ways etc. Facility Types could include:

- TBD based on future development and further investigation.

Example of Potential Application:



Mahoney Avenue Extension, Town of Georgina
Source: MMM Group



Maps 4.5 and 4.6 illustrate the hierarchy of proposed Trail and AT routes as part of a Trail and AT Route Network Concept. As was the case for the Candidate Route Network, the hierarchy of routes were refined based upon information gathered during field investigation and input gathered from Town Staff, the Steering Committee, local stakeholder and public through different stages of the study. A more comprehensive discussion of potential facility types (as noted in the tables above) is presented in **Appendix D**. It is recommended that the Town of Georgina have regard to the guidelines and standards included in the Master Plan but that the primary reference for the design of Trail and on-road AT facility types is Ontario Traffic Manual (OTM) Book 18 Bicycle Facilities, OTM Book 15 Pedestrians and the TAC Bikeway Traffic Control Guidelines.

4.3 Trails & AT Facility Design

When ultimately selecting a preferred facility type, the Town is encouraged to use the Bicycle Facility tool identified in OTM Book 18. The tool is a three step process intended to aid practitioners responsible for the selection design and implementation of a facility type. **Figure 4.2** illustrates the three-step process. A brief description of each of the steps is provided in **Table 4.7**.

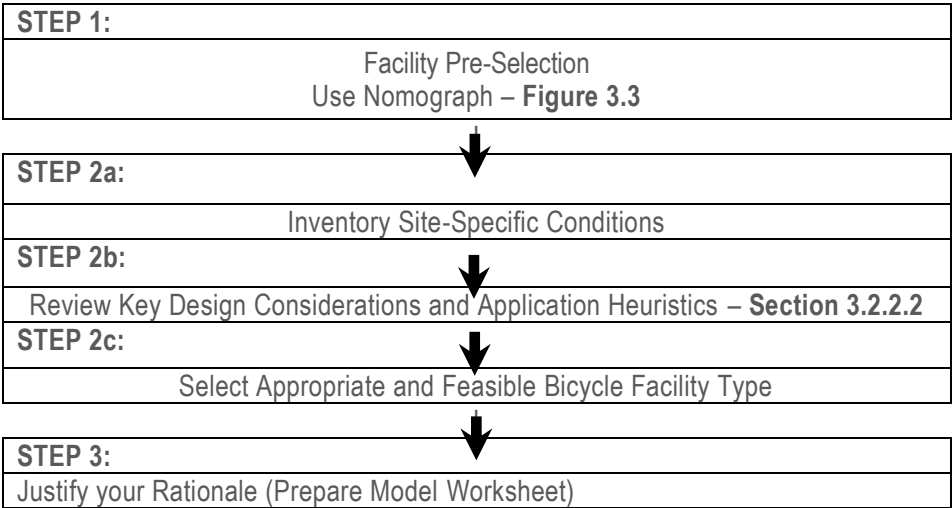


Figure 4.2 – Three Step Facility Selection Process
Source: OTM Book 18

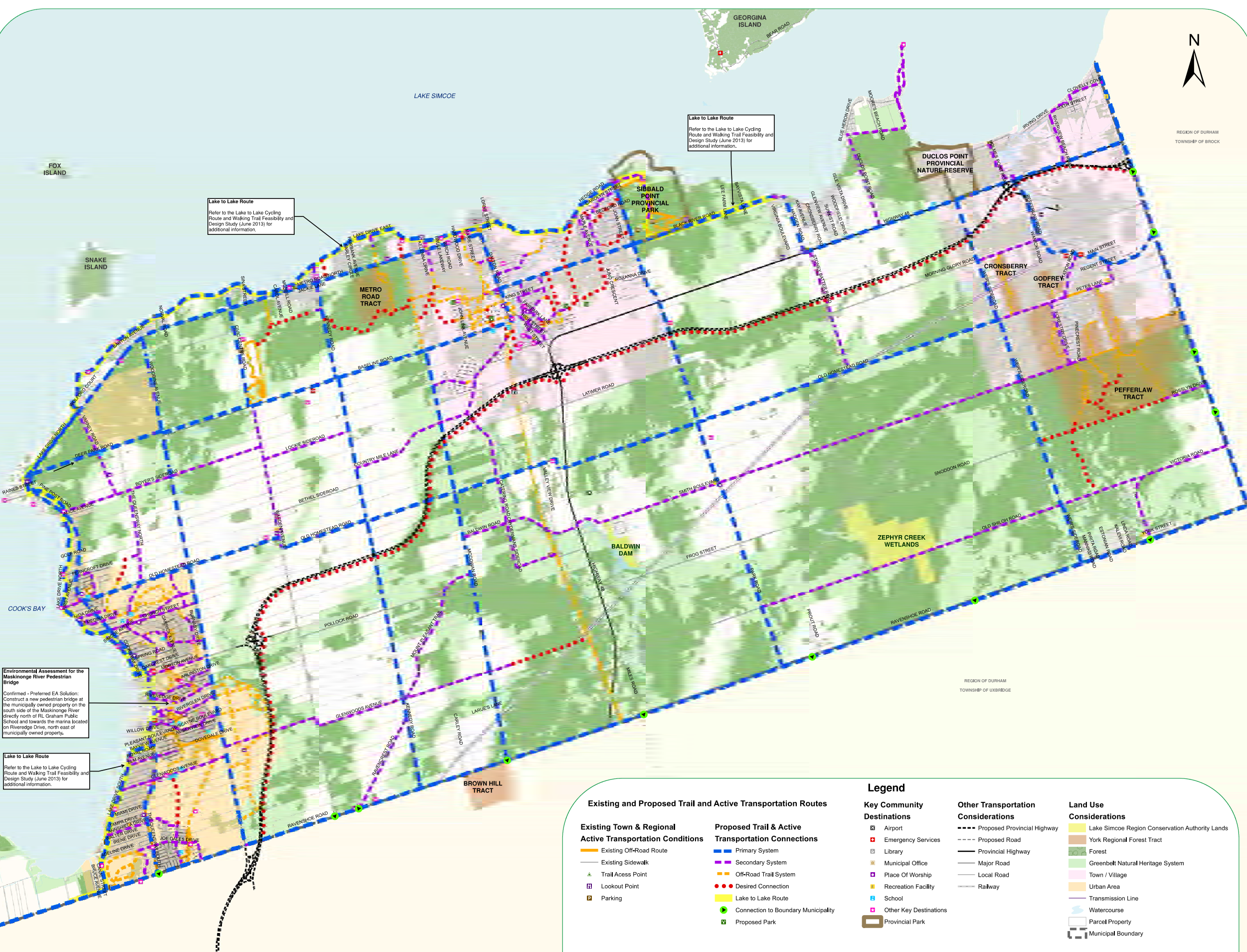
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PROPOSED TRAILS & ACTIVE TRANSPORTATION NETWORK CONCEPT
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY

MAP 4.5



REGION OF DURHAM
TOWNSHIP OF BROCK



Existing and Proposed Trail and Active Transportation Routes

Existing Town & Regional
Active Transportation Conditions

- Existing Off-Road Route
- Existing Sidewalk
- Trail Access Point
- Lookout Point
- Parking
- Proposed Trail & Active Transportation Connections
- Primary System
- Secondary System
- Off-Road Trail System
- Desired Connection
- Lake to Lake Route
- Connection to Boundary Municipality
- Proposed Park

Legend

Key Community
Destinations

- Airport
- Emergency Services
- Library
- Municipal Office
- Place Of Worship
- Recreation Facility
- School
- Other Key Destinations
- Provincial Park

Other Transportation
Considerations

- Proposed Provincial Highway
- Proposed Road
- Provincial Highway
- Major Road
- Local Road
- Railway

Land Use
Considerations

- Lake Simcoe Region Conservation Authority Lands
- York Regional Forest Tract
- Forest
- Greenbelt Natural Heritage System
- Town / Village
- Urban Area
- Transmission Line
- Watercourse
- Parcel Property
- Municipal Boundary



Information based on Base GIS Data provided by the Town of Georgina and York Region.

0 1.75 3.5 7 Kilometres

REGIONAL MUNICIPALITY OF YORK
TOWN OF EAST GUILMBURY

Environmental Assessment for the
Maskinonge River Pedestrian
Bridge

Confirmed - Preferred EA Solution:
Construct a new pedestrian bridge at
the municipally owned property on the
south side of the Maskinonge River
directly north of RL Graham Public
School and towards the marina located
on Riverside Drive, north east of
municipally owned property.

Lake to Lake Route

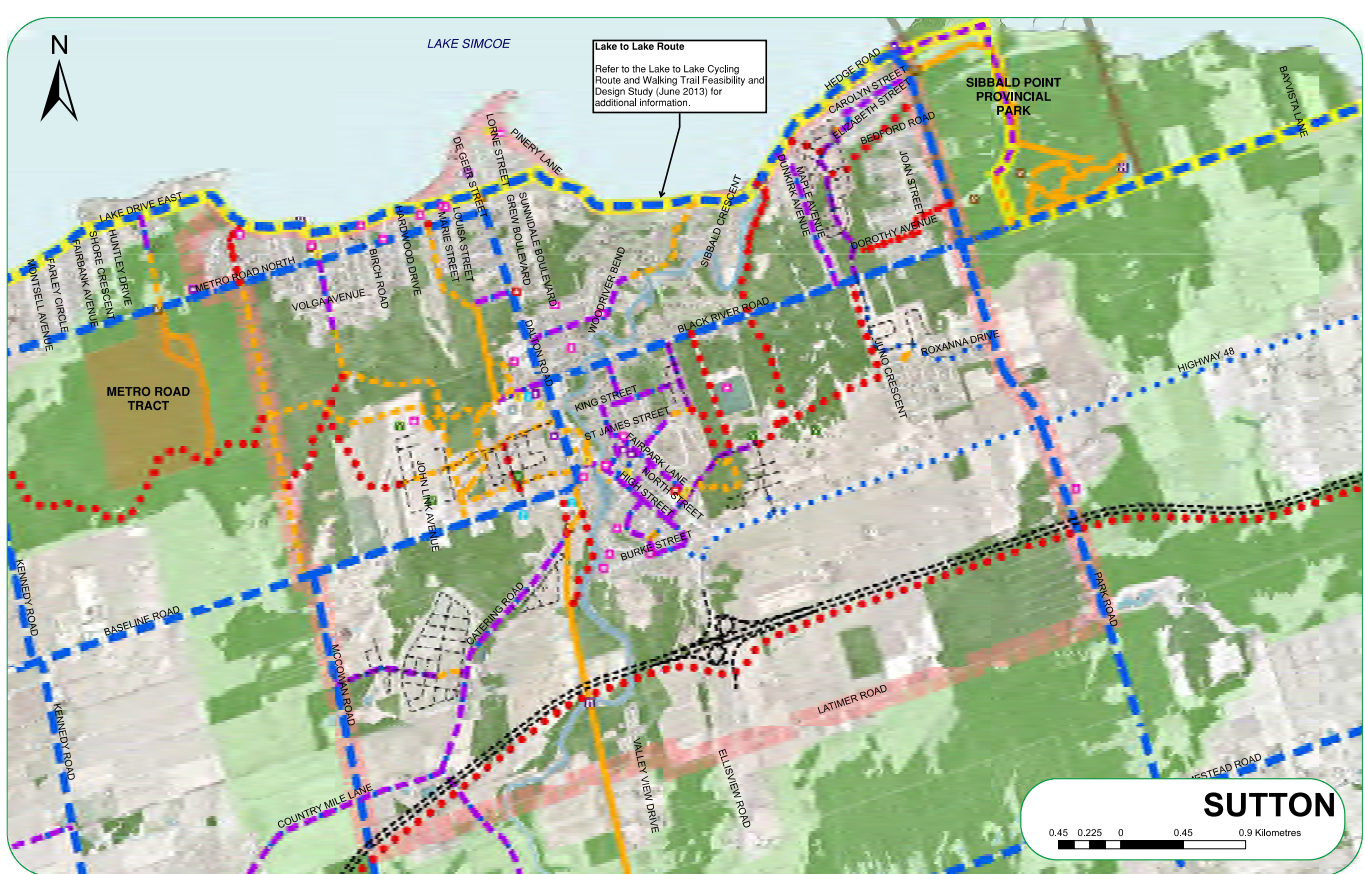
Refer to the Lake to Lake Feasibility and
Design Study (June 2013) for
additional information.

Lake to Lake Route
Refer to the Lake to Lake Feasibility and
Design Study (June 2013) for
additional information.

Lake to Lake Route
Refer to the Lake to Lake Feasibility and
Design Study (June 2013) for
additional information.

PROPOSED TRAILS & AT NETWORK CONCEPT
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY

MAP 4.6



Existing and Proposed Trail & Active Transportation Routes

Existing Town and Regional Active Transportation Conditions

- Existing Off-Road Route
- Trail Access Point
- Lookout Point
- Parking

Proposed Trail & Active Transportation Connections

- Primary System
- Secondary System
- Off-Road Trail System
- Desired Connection
- Lake to Lake Route
- Connection to Boundary Municipality
- Proposed Park

Legend

Key Community Destinations

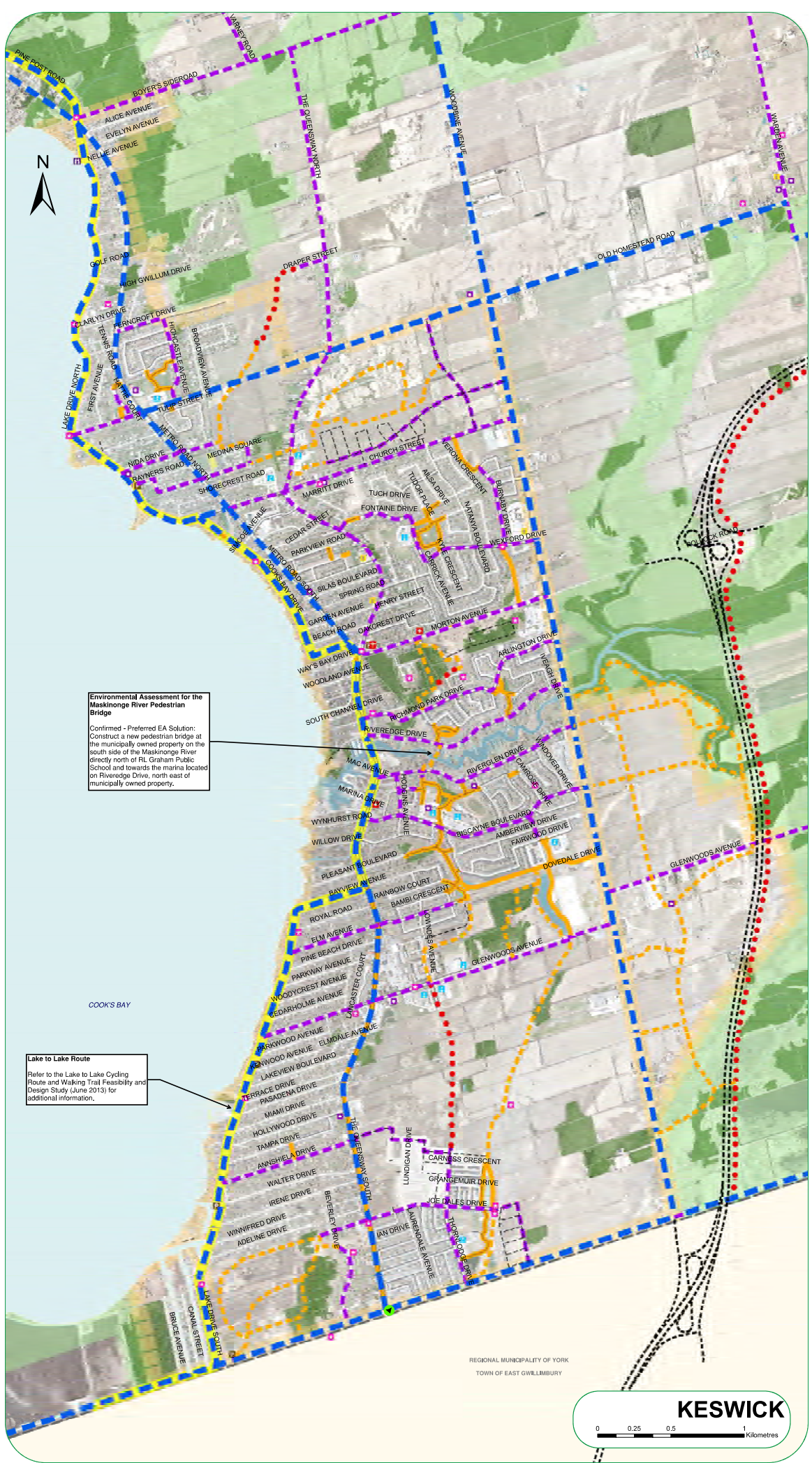
- Airport
- Emergency Services
- Library
- Municipal Office
- Place Of Worship
- Recreation Facility
- School
- Other Key Destinations
- Provincial Park

Other Transportation Considerations

- Proposed Provincial Highway
- Proposed Road
- Railway

Land Use Considerations

- Lake Simcoe Region Conservation Authority Lands
- York Regional Forest Tract
- Forest
- Greenbelt Natural Heritage System
- Urban Area
- Town / Village
- Transmission Line
- Watercourse
- Parcel Property





THE TRAILS & AT NETWORK



Table 4.7 – Facility Selection Process Description

Step 1
Step 1 allows practitioners to pre-select the desired facility type based on the motor vehicle operating speed and the average daily traffic volume. This step is accomplished through the use of the 'Desirable Bicycle Facility Pre-Selection Nomograph' illustrated in Figure 3.3.
Step 2
Step 2 guides practitioners to take a more detailed look at site specific characteristics in order to determine the appropriateness of the pre-selected facility type. Practitioners use this step to critically evaluate the situation in order to select the most appropriate facility type.
Step 3
Step 3 guides practitioners in documenting their rationale for their final decision. Sections 3.2.2.1 to 3.2.2.3 provide more detailed information about each step.

Figure 4.2 is a proposed worksheet which is intended to be used by practitioners when undertaking the facility selection process. For all other details please refer to Section 3.2 of OTM Book 18.

Step One

Pre-select a desirable facility type

Roadway and Section:

Traffic Volume:

Date and source:

Motor vehicle operating speed:

Date and source:

Nomograph Result:

Step Two

A more detailed look

Photo

This view shows the following relevant factors:

Describe Your Site:
Use the Tables in Chapter 3 to describe your site:

- Volume
- Speed
- Sightlines
- Cyclist demand
- Vehicle Mix
- Topographic barriers
- Collision history
- Directness/Accessibility
- Available space
- User skill/security/safety
- User delay
- Maintenance
- Intersection conditions
- By-laws/Regulations
- Costs/funding

Examine Context:
From the Tables in Chapter 3 document applicable principles and application heuristics.

Photo

This view shows the following relevant factors:

Photo

This view shows the following relevant factors:

Attach additional sheets if more documentary photos and data are required.

Step Three

Develop your rationale

If Step 1 yields a result different than Step 2 or if Step 1 is inconclusive, prepare a rationale for selecting a preferred option.

List the relevant principles and heuristics:

Document your design considerations to support the rationale.

Figure 4.2 – OTM Book 18 Figure 3.2 – Model Worksheets for the Facility Type Selection Tool

Source: MMM Group



Recommendation 4.2:

The three step facility selection tool, as identified in OTM Book 18 should be utilized when identifying the preferred on or off-road facility for a proposed linkage in the trail and active transportation network

Recommendation 4.3:

The guidelines prepared as part of the Trails and Active Transportation Master Plan (Appendix D) are intended to inform the detailed design and construction of trail and active transportation facilities and should be referenced in coordination with OTM Book 18, OTM Book 15, the TAC Bikeway Control Guidelines and the Provincial Built Environment Standards.

Recommendation 4.4:

The Town recognizes that the trails and active transportation network will change over time as new opportunities offered by unopened road allowances, hydro right-of-ways, abandoned rail corridors, open space and future roadway improvements become available. Potential changes to the networks arising from these opportunities should be evaluated on an on-going basis and the Master Plan updated in a timely and responsive manner.

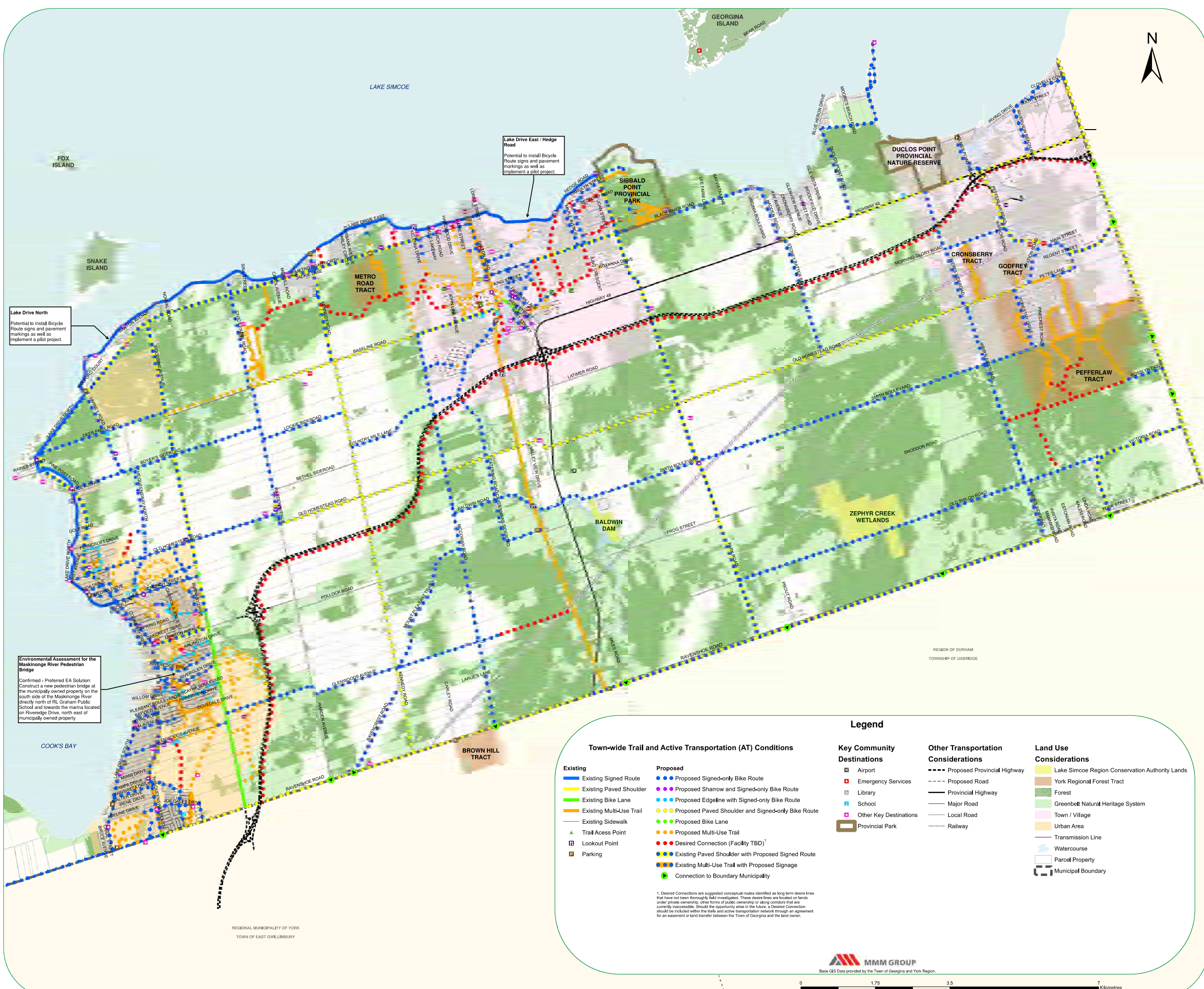
4.4 Georgina's Proposed Trail & AT Network

The proposed Trails and AT network for the Town of Georgina is illustrated on **Maps 4.7** and **4.8**. The network includes route alignments as well as proposed facility types. **Table 4.8** provides a summary of the proposed network facility lengths.

Table 4.8 – Town of Georgina Trails and AT Network by Facility Type

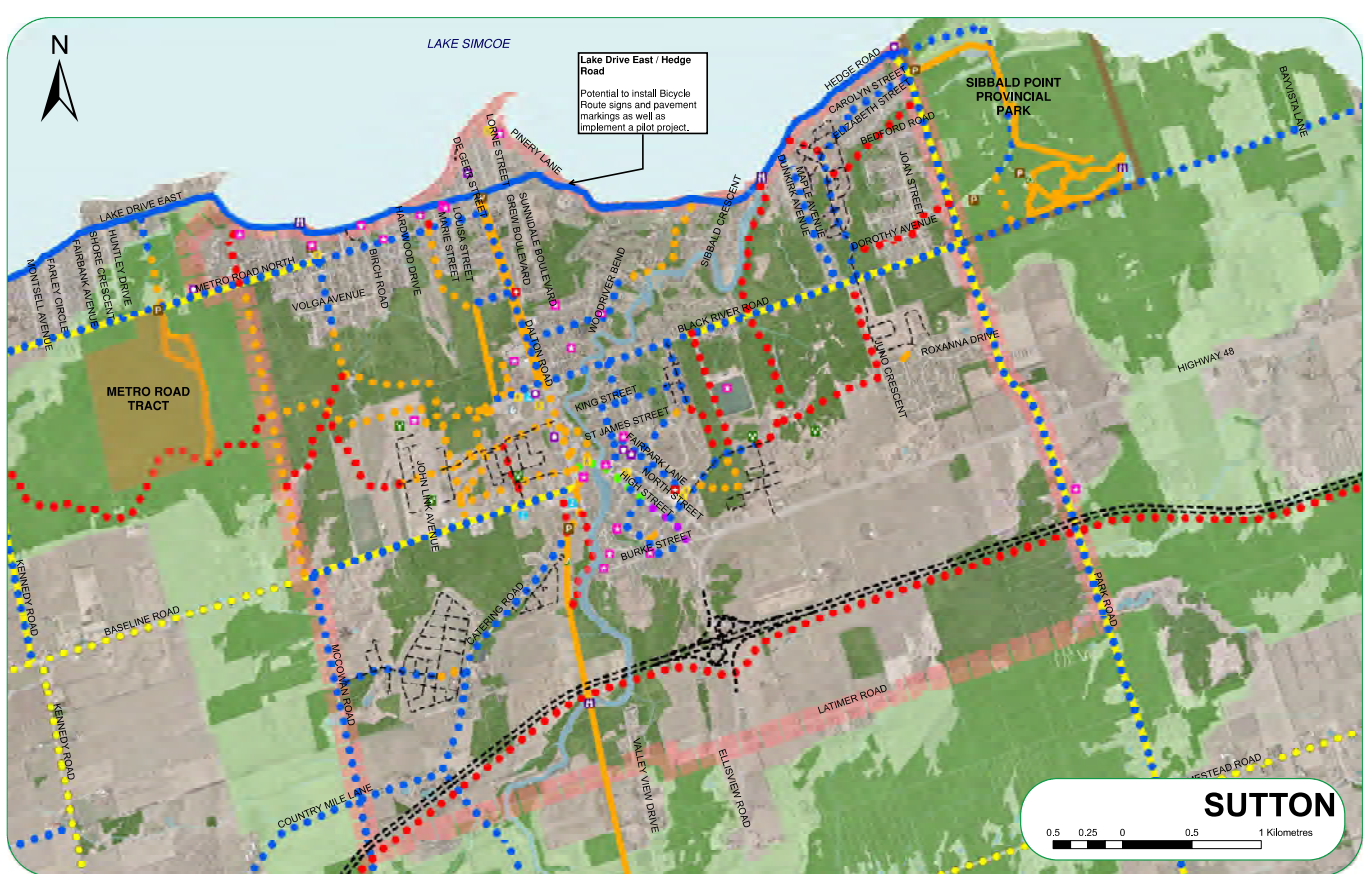
Facility Type	Existing (km)	Proposed (km)	Total (km)
Bicycle Lane	4.6	1.0	5.6
Signed-only Cycling Route	6.6	204.7	211.3
Paved Shoulder	47.5	45.7	93.2
Multi-use Trail	53.3	42.6	95.9
Sharrow	0	7.2	7.2
Edgelines	0	5.2	5.2
Desired Connections (Facility TBD)	-	28.2	28.2
Total	111.9	334.6	446.5

PROPOSED FACILITY TYPES
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY



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MAP 4.8
PROPOSED FACILITY TYPES
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY



Town-wide Trail and Active Transportation (AT) Conditions

- Existing**
- Existing Signed Route
 - Existing Paved Shoulder
 - Existing Bike Lane
 - Existing Multi-Use Trail
 - Existing Sidewalk
 - Trail Access Point
 - Lookout Point
 - Parking
- Proposed**
- Proposed Signed Route
 - Proposed Sharrow
 - Proposed Signed Route with Edgeline
 - Proposed Paved Shoulder
 - Proposed Bike Lane
 - Proposed Multi-Use Trail
 - Desired Connection (Facility TBD)¹
 - Existing Paved Shoulder with Proposed Signed Route
 - Existing Multi-Use Trail with Proposed Signage
 - Connection to Boundary Municipality
 - Proposed Park

Key Community Destinations

- Airport
- Emergency Services
- Library
- Municipal Office
- Place Of Worship
- Recreation Facility
- School
- Other Key Destinations
- Provincial Park

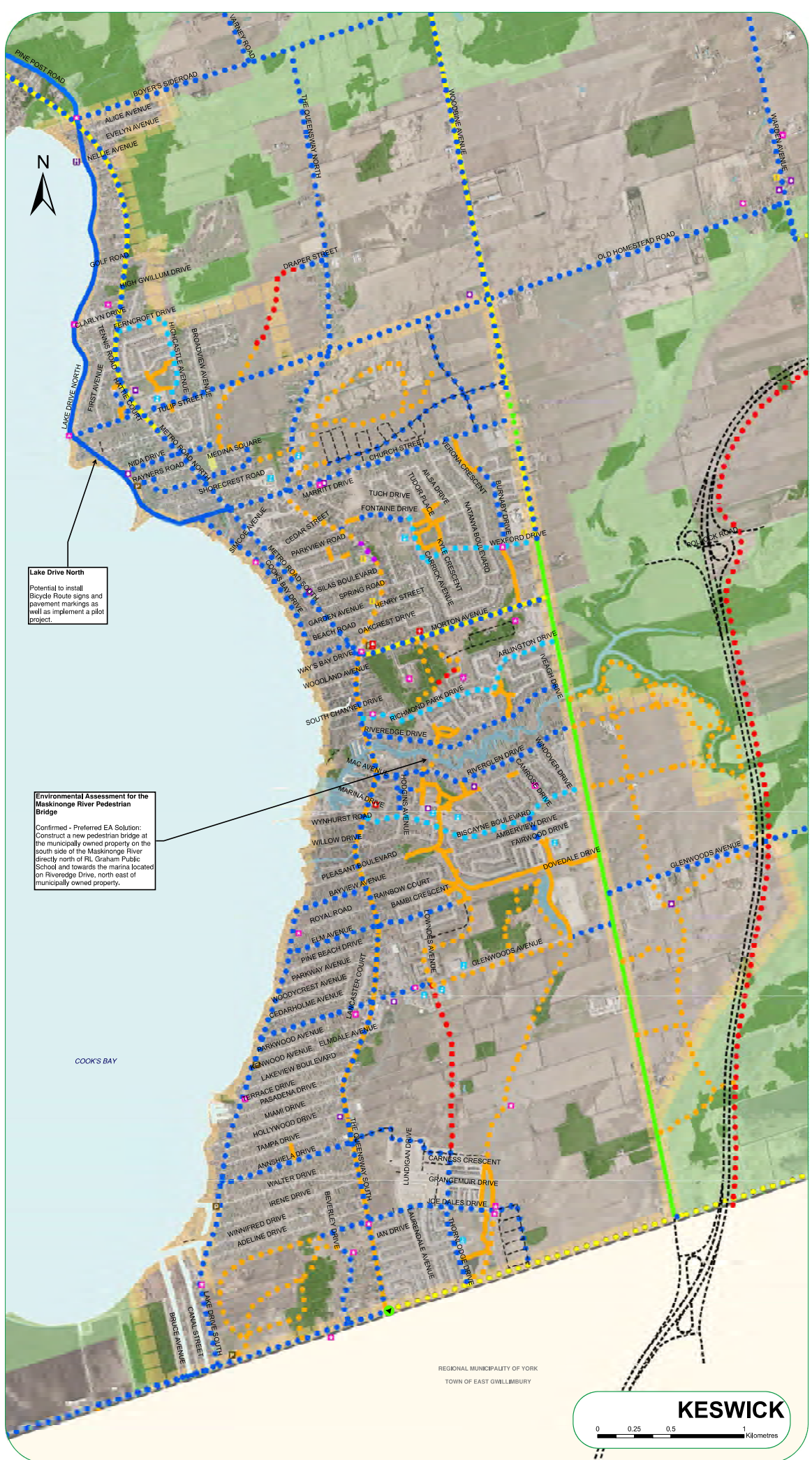
Other Transportation Considerations

- Proposed Provincial Highway
- Proposed Road
- Railway

Land Use Considerations

- Lake Simcoe Region Conservation Authority Lands
- York Regional Forest Tract
- Forest
- Greenbelt Natural Heritage System
- Town / Village
- Urban Area
- Transmission Line
- Watercourse
- Parcel Property

¹ Desired Connections are suggested conceptual routes identified as long term desire lines that have not been thoroughly field investigated. These desire lines are based on land use, ownership, other forms of public ownership or along corridors that are currently inaccessible. Should the opportunity arise in the future, a Desired Connection should be indicated within the trails and active transportation network through an agreement for an assessment or land transfer between the Town of Georgina and the land owner.



Lake Drive North
Potential to install Bicycle Route signs and pavement markings as well as implement a pilot project.

Environmental Assessment for the Maskinonge River Pedestrian Bridge
Confirmed - Preferred EA Solution:
Construct a new pedestrian bridge at the municipally owned property on the south side of the Maskinonge River directly north of RL Graham Public School and towards the marina located on Riveredge Drive, north east of municipally owned property.



5.0 PLANNING FOR TRAILS & AT

5.1 Trails & AT Planning Considerations

Planning is a key element of the implementation process. There are a number of planning requirements which would need to be addressed as the master plan is implemented. The following are some of the planning considerations that Town staff responsible for the plan's implementation may need to consider.

5.1.1 The Trail and AT Plan & the Town's Official Plan

The Official Plan (OP) is the Town's guiding document for development and is the blueprint for future growth. The policies included in the OP and the Trails and AT Master Plan should be consistent. When the Town next updates their OP it is recommended that staff review the policies and recommendations pertaining to trails and active transportation (AT) to ensure that they are consistent with those included in the Trails and AT Plan.



In addition, when the OP is next updated, the Town should consider incorporating some of the short-term initiatives, recommendations and programs outlined in the plan's implementation and communication strategy.

Recommendation 5.1:

When next updated, the Town's Official Plan should be reviewed to ensure that policies are included which address trails and active transportation and that they are consistent with the policies and recommendations found in the Trails and Active Transportation Master Plan. The Town should consider making specific reference to the network mapping as a schedule.

5.1.2 Community Planning & Design Strategies

Land Use Planning

The design of a community can impact / support how and when people engage in active transportation and recreation. Research indicates a direct connection between the layout of communities and an increase in health, social interaction, safety and economic development at an individual and community-level. A key resource for municipalities within Ontario is the "Built Environment Toolkit" developed by the Heart and Stroke Foundation.

The toolkit provides community design strategies which can help to influence levels of activity including day to day trips using sustainable modes of transportation. Community destinations that are designed and implemented within a 5 – 10km distance from a residential area can easily be accessed by a mode of transportation other than a motor vehicle. However, planning and design strategies currently used have moved away from this practice. The following are suggested land-use planning strategies (many of which are likely being applied by Town staff) which could be considered when designing communities in Georgina to support more active forms of transportation and recreation.

Mixed Uses: Mixing residential areas with other land uses to decrease the distance between a person's residents and their destination of choice.

High Density Development in Urban Areas: Encouraging higher-density urban areas (e.g. Keswick) and situating amenities and destinations within walking distance of residences. High density development also benefits businesses as pedestrians are more likely to shop in their own area.



PLANNING FOR TRAILS & AT



Convenient School Locations: Conveniently locating schools and other amenities to enable children to safely and securely cycle or use trail to their school or key destination. This may also increase a parents' level of comfort.

Integrated Active Living Infrastructure: Integrating active living infrastructure (e.g. parks, trails, sidewalks, street lighting and bike racks) into community design can encourage and support an increase in physical activity by making the activity more visible and accessible.

Appealing Streetscapes: Making streetscapes appealing to pedestrians and cyclists through effective design with good lighting, well-maintained sidewalks, bike paths, signage, cross walks and improved aesthetics. Well-designed streetscapes can also encourage a highlighter level of use which can influence the overall atmosphere and increases the number of "eyes of the streets" (CPTED). Green infrastructure such as urban tree canopy and shade structures can effectively reduce the urban heat island effect, improve air quality and prevent heat related illness. Continuing to explore and implement land-use planning initiatives and policies will support active transportation and reduce automobile use. This will be attained by encouraging a mixed-use, high density community development approach, which promotes active transportation friendly streetscapes, as well as off-road connections through public and private spaces.

Bikeway Boulevard Design: Designing streets that are safer for cyclists include features such as narrower streets, bicycle lanes, sidewalks, landscaping, parallel parking and traffic calming measures. Cyclists are encouraged to use the street more which increases the number of cyclists.

Providing Recreational Facilities: Providing recreational facilities (e.g. parks, trails and safe places to play outside) can have an impact on physical activity for all age groups, particularly children and youth.

Recommendation 5.2:

Continue to explore and implement land-use planning initiatives and policies which support active transportation, a mixed-use, high density community development approach and continues to promote active transportation friendly streetscapes as well as off-road connections through public and private spaces.



Municipal Park on Lake Simcoe Shoreline, Town of Georgina - Source: MMM Group

5.1.3 Transportation Planning

Transportation planning is another key element in the design and development of communities. The current trends and practices do not always support sustainable transportation. The field must change from a “car-first” approach to encourage people to shift to more active forms of transportation for some of their day to day activities. Some strategies include:

Increased Connectivity: Increasing active transportation connectivity means that routes are continuous and provide connections to key destinations within the Town and to surrounding municipalities. This could include continuous facility development, direction connections to trail facilities, short blocks, grid-like street layouts and accessible links to public transit.

Creating Safe Routes to School: Well-marked and safe crossings, sidewalks, crossing guards, safe bicycle parking and traffic-calming measures around schools to reduce the number of vehicles entering the school zone. Walking programs and utilizing the school travel planning approach can help to create a safer environment, reduce vehicular emissions and higher rates of pedestrian activity.

Improved Transit Connections: Improving public transit through encouragement includes location stops in close proximity to major residential nodes, providing frequent services and ensuring ease of connection to key destinations throughout the community and to commuter destinations in bordering municipalities. Transit trips typically start and end with a pedestrian trip. Most transit users can achieve their 30 minute / day activity requirement but are unaware of this benefit.



Planning for Transportation in Rural Areas, Town of Georgina - Source: MMM Group

Recommendation 5.3:

Continue to improve connections to off-road trail facilities on both public and private lands and to use trails as a way to promote active transportation and recreation throughout the Town.

Recommendation 5.4:

The Town should collaborate with York Region, York Region Public Health and school boards to apply a school travel planning approach and active and safe routes to school programming within the Town or build on existing programs/initiatives already being undertaken by local boards.

Recommendation 5.5:

The Town should integrate and link public transit stops or future major commuter transit connections to the on and off-road system of trails and active transportation facilities.

5.1.4 Trails and AT Facilities in New Development Areas

Future land development should consider planning for trail and active transportation facilities and should be guided by an iterative process in the early planning stages. Planning within new development areas should reflect the network and recommendations included in the master plan and should be integrated into day to day planning process / practice. The Trails and Active Transportation master plan should be a key resource for the Town when communicating with developers new or updated planning practices / processes.

The following are some strategies which could be used by the Town to promote trail and active transportation facility implementation in new development areas:

Prepare Conceptual / Layout Plan: Developers should be required to prepare and submit trails or on-road active transportation conceptual / layout plan including typical details for facilities within the subdivision boundary.

TOWN OF GEORGINA

Trails & Active Transportation Master Plan



The conceptual plan (which could form part of an open space management plan) would be reviewed by the Town's planning and building department and refined prior to approving the draft plan of subdivision. The plan should be consistent with the Trails and Active Transportation Master Plan and other relevant municipal planning documents.

Prepare Detailed Design Drawings: Prior to the Plan of Subdivision approval and registration, the developer should be required to prepare and submit detailed design drawings, specifications and cost estimates for pathway construction, to the satisfaction of the municipal development review team.

Prepare Requirements for Developers: As part of Development Agreements (Conditions of Approval), require the developer to construct on and off-road trails and active transportation routes within the boundaries of the applicable stage of the subdivision as part of the installation of other infrastructure such as utilities and roadways.

They should also consider providing a notice to home purchasers of the proposal to construct a trail or active transportation facility including the identification of the pathway on plans displayed in a sales office, and a clause in agreements of purchase and sale and / or lease.

Integrate with the Development Charges By-law: Including trails and active transportation facilities as eligible infrastructure under the Development Charges By-law as part of the new update of the Town's by-law.

Consultation: When trails or active transportation facilities are planned in new development areas, the Town should not require additional consultation beyond what is required for subdivision planning and approvals.

Where possible, new development areas should contain links to the existing and proposed facilities and should reflect a consistent approach to the development of facilities (e.g. density, variety, hierarchy and character).

When implementing trail or active transportation facilities, developers, in consultation with Town staff should also consider topography, drainage, slopes, soil conditions, plant and animal communities, microclimates and human comfort, heritage and archeological resources, public education opportunities and significant views and vistas.



Many developers understand the value of integrating active transportation and recreation facilities into their projects including home buyers increasingly seeking pedestrian and cycling friendly neighbourhoods. However, developers should be encouraged to notify prospective buyers where off-road trails and pathways are planned.

This could be done when lots are advertised for sale by providing information at sales offices, including information in sales packages and including signage where pathways are to be constructed.

By providing buyers with this information developers and the Town may be able to alleviate difficulties with communication at a later date. When facilities are installed after homes are built, conflict may arise when adjacent residents claim that they were not aware of the plans for adjacent trail construction even if it was communicated in municipal planning documents.

Recommendation 5.6:

Changes to the way trails and active transportation facilities are planned, designed and constructed as part of the development process should be communicated clearly to the development community through an iterative process.

Recommendation 5.7:

Consideration for and development of updates to the Development Charges By-law to include trail and active transportation facilities as eligible infrastructure when the Town next undertakes an update to their By-law.

5.1.5 Retrofitting Trails & AT Facilities in Existing Neighbourhoods and Ongoing Public Consultation

Implementing or retrofitting facilities in established neighbourhoods can be very challenging. Opposition may arise even if the routes are documented in a Council approved planning document. Gathering public consensus and opinion typically only occurs when the project is being implemented despite consultation in the planning stage. Different methods of public and stakeholder consultation may be required to move a project from detailed design to implementation. **Figure 5.3** illustrates the four levels of public / stakeholder consultation which have been established for consideration by the Town when moving to implementation.



The level of consultation may be confirmed based on project specific considerations such as project location, required design approvals, scope and complexity of the project and whether the project has been included in the trails and active transportation master plan. It can also be further influenced by the type of project e.g. new development of an on or off-road linkage or improvements to an existing trail.

The overall goal is to engage residents in an open, public consultation process in the earliest possible stages. In some cases, the most vocal opponent may become the greatest supporter if they are provided with an opportunity to provide their opinions and concerns and if they are clearly documented and responded to in the planning process.

Level 1: Notification of Construction

For projects on Town lands a public notice should be published on the Town's webpage and in other appropriate local publications. The notice should briefly explain the project, note that its part of the approved Trails and AT Master Plan identify the expected construction start and end dates and provide a contact name and number for questions. The notice should be published at least 30 days in advance of project start-up. If a significant issue is raised, staff in consultation with Councillors may choose to schedule a local neighbourhood meeting using in-house resources.

Level 2: Local Neighbourhood Meetings

A Councillor or Town staff member may select to host a neighbourhood information meeting. These meetings would be for projects in the final draft design and approval stage but not yet tendered. The meeting would provide the public with an opportunity to review and comment on recommended facility alignment and design guidelines. The meeting may also serve to present proposed changes or solutions to the alignment or design form that was previously presented to area residents. Potential outcomes for these meetings could include finalizing and / or revising detailed designs, securing outstanding approvals, tendering projects, issuing notification of construction and proceeding to construction. The Town may also revise design and report to area residents at a second neighbourhood meeting (see Level 3 Consultation) and may defer the project until staff has time to consult further with the Councillor, residents and report back to Council with a recommended planning and design solution for the project. If significant revisions are recommended and an additional study to confirm these revisions is required it is recommended that the Town proceed to level three consultations.

Level 3: Focused Consultation as Part of the Detailed Design Process

When a significant revision to the design concept or on-road or off-road route alignment is required Town staff may elect to undertake the work internally or secure an outside consultant. In this case, one or more working meetings may be scheduled with the local Councillor or residents and stakeholders to identify, review and refine any design changes. If there is consensus to proceed based on these meetings, the following should be undertaken - finalizing the design, securing approvals, tendering the project, notification of construction and construction of the project. If there is no consensus, staff should report back to Council with a recommended course of action and request further direction.



Level 4: Broad Consultation for Class EA or Similar Study Process

The development of a trail or cycling route in an existing corridor does not normally require a separate Class Environmental Assessment (EA). At the time of finalizing this Master Plan, a number of amendments to the Ontario Municipal Class Environmental Assessment (MCEA) have been proposed by the Municipal Engineers Association of Ontario regarding cycling and trails. If adopted by the Ministry of Environment, the majority of cycling and trail projects would be considered pre-approved (no Class EA required). Only major cycling / trail projects in new rights-of-way with a cost exceeding \$3.3 million would require a Schedule B Class EA or if over \$9.5 million, a Schedule C Class EA. However, the Town may elect to conduct one major trail / water crossing projects as part of a Class EA or an individual EA for another Town project. The alignment and design of the route should be an integral component of the EA process. The consultation program for the EA should be consistent with the Municipal Class EA Act consultation requirements.

Figure 5.3 – Levels of Public & Stakeholder Consultation

Source: MMM Group

Recommendation 5.8:

The four levels of public and stakeholder consultation should be used as a guide to facilitate consultation when individual trail and active transportation projects are being implemented.

5.1.6 Trail & AT Routes in Unopened Road Allowances, Abandoned Railways and Utility Corridors

Unopened road allowances, abandoned railway corridors and utility corridors provide excellent opportunities for active infrastructure. In rural areas unopened road allowances and abandoned railways may be considered for trail opportunities and the Town should examine these opportunities as potential routes prior to disposing of them.

Utility corridors in rural areas may be owned by the utility company or leased from a landowner but may still have potential for trail development. Utility corridors found in urban areas typically have substantial easements and may be informally used as a trail providing direct connections over potentially long distances.

When the alignment and design details are properly considered, trails can also serve as emergency and service access routes to municipal assets in the hydro corridor. A number of municipalities have adopted policies and practices to provide service and emergency access routes to utilities such as manholes along sanity sewer lines in river valleys in case of line blockage. Many of these routes may also be integrated into the trail network in the future if such opportunities exist.

**Recommendation 5.9:**

The Town should examine the potential to use unopened road allowances and abandoned roads as potential routes prior to disposing of them.

Recommendation 5.10:

Consider developing a municipal policy to consider utilizing utility corridors in the urban and rural areas to establish off-road trails and active transportation routes where practical and feasible.

5.1.7 Land Acquisition & Securement Strategies

The Trails and Active Transportation Master Plan has been developed based on the goal of developing on and off-road facilities on publically owned lands. However, there may be some routes that are proposed on private lands and are intended to be future desire lines. If at some time in the future the land with a desire line becomes available for sale or if a land owner is willing to enter into an easement agreement, this should be explored by the Town. Other connections can be found in new development areas or strategically planned secondary plan areas that will become part of the Town's land base once development occurs.

In the cases of desire lines or private property, permission for access or a strategy to secure ownership will be required before a project can be constructed. A range of strategies are available to accomplish this, including easements or Regional, public agency or Town purchases.

Recommendation 5.11:

Develop a strategy to secure public access for Trail and AT routes that are identified on land currently in private ownership or under the ownership of local public partners (e.g. York Region, Lake Simcoe Region Conservation Authority, Province of Ontario, etc.)

5.2 Promoting & Marketing the Trails and Active Transportation Network

By adopting the master plan, the Town is clearly showing its commitment to creating more healthy and active environments for its residents (both seasonal and permanent) as well as local tourists. However, the development of infrastructure will not be sufficient to support this change. Communication and outreach initiatives that educate the public and complement the network will help to support the success of this plan.



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A successful network is one that is actively and properly used and is integrated into day to day activities – for recreation or utilitarian purposes. It is the Town’s responsibility to work collaboratively with key local and regional stakeholders to identify communication and outreach strategies which are based on five communication cornerstones.

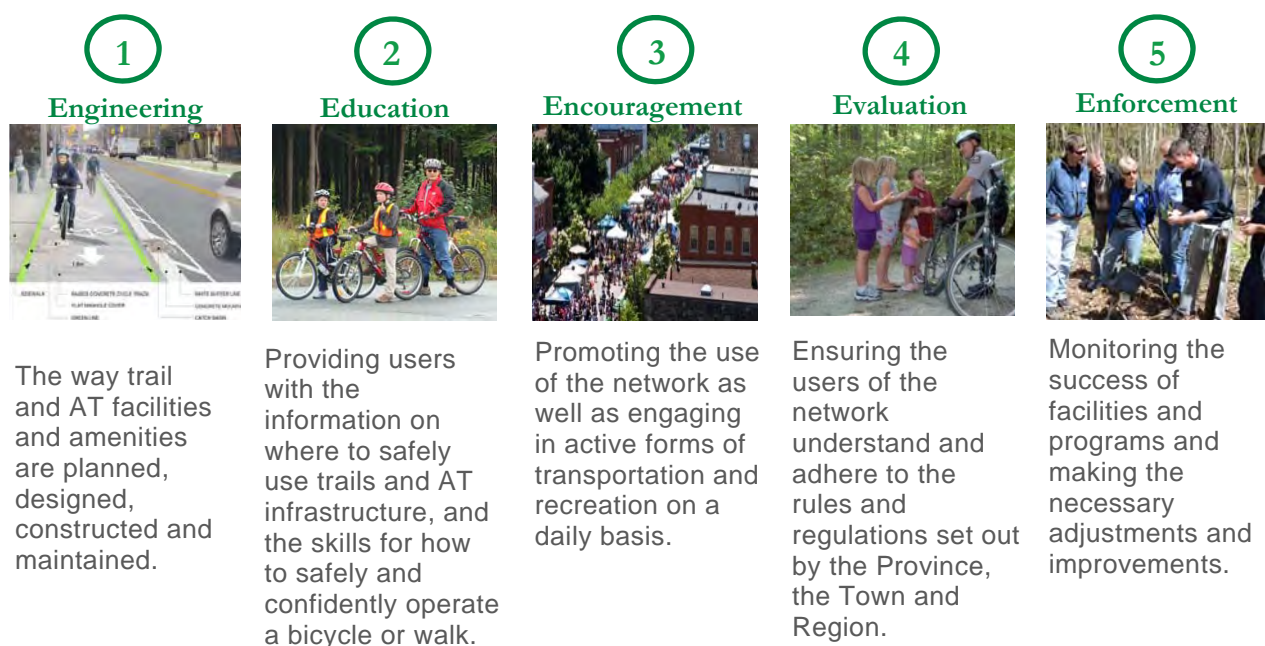


Figure 5.4 – The Five Communication Cornerstones

Source: MMM Group

The five cornerstones should be a focus when developing trail and AT initiatives. **Table 5.1** provides additional details regarding four of the five elements. For the “Engineering” requirements, the Town should use existing municipal and provincial guidelines to guide future initiatives.



Table 5.1 – Overview of Communication Cornerstones

Cornerstones	Why	What	How
Education	Can have a positive influence on public behaviour to produce safer conditions and provide incentives to encourage active transportation and recreation.	Formal education and training encourages people to use alternative modes and shift transportation choices for day to day activities or recreation.	People of all ages and abilities should be educated on the proper use of the network. Implementing educational programs will improve skills, safer use of trails, and can raise public awareness of potential benefits.
Encouragement	Hesitation due to lack of encouragement can lead to a perception of a reduced safety. Encouragement can help to increase involvement and mitigate safety concerns.	Community-Based Social Marketing (CBSM) - a practical approach that stresses direct contact among community members and focuses on removing barriers could be used to identify realistic programs.	The Town and its partners should use CBSM to market and promote the network as a means of encouraging the use of on and off-road facilities.
Enforcement	Enforcement is a critical element to overall safety. Ensuring rules and regulations are properly monitored and enforced can influence the network's success.	A main goal of enforcement is to increase awareness regarding user rights and responsibilities which could reduce incidents that cause property damage, injury, or death.	Enforcement initiatives should target on and off-road facilities as well as user groups. All users should be aware of proper operating procedures in the vicinity of cyclists, pedestrian and trail users.
Evaluation	Ongoing monitoring and evaluation of implementation, facilities, programs, and user satisfaction is essential to refining the delivery of facilities Town-wide.	Regular monitoring will enable planners, designers, and engineers to remain well-informed of the facilities across the Town.	Potential performance measures that could provide some background data to assist Town staff in making appropriate decisions about route priorities, use, facility type, etc., can be found in Section 6.6 .



5.2.1 Understanding the Target Audience

Before developing trail and active transportation promotion and outreach initiatives, one must understand the target audience for whom the programs are being developed. A target audience can be based on a number of factors including mode of transportation, age group, gender, resident or visitor, type of trip, etc. For each target audience there are key elements which should be considered which could help to form key messaging / communication techniques. **Table 5.2** is a summary of these target audiences.

Table 5.2 – Communication and Outreach Target Audience Overview

(Original Source: Adapted from – Idaho's Bicycle and Pedestrian Program – Strategic Communications Plan)

Target Audience	Elements Valued	Key Messaging Concepts
Modes of Transportation		
Motorists	<ul style="list-style-type: none">• Safety while on the roads• Efficiency of trips from origin to destination• Budget	<ul style="list-style-type: none">• Drive safely, be aware of cyclists and respect their right to share the road.• Benefits are realized Town-wide from streets that are safe for all modes of transportation. Everyone can get to where they want to go efficiently and safely.• Using an alternate mode such as biking to do errands close to home to work occasionally can have a positive effect on your expenses, the environment and your health.
Pedestrians	<ul style="list-style-type: none">• Safety while on roads, trails or pathways• Health benefits of walking• Pleasant and relaxing experience• Environmental impacts• Budget• Flexibility of choice	<ul style="list-style-type: none">• Walk safely, be aware of motorists and cyclists and respect their right to share the road. Know the laws and practices to walk safely.• Walking to work, for recreation or to run an errand can have a positive impact on your health, the environment and your expenses.• Walking can be a group activity and can enhance social interactions and community building.



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Table 5.2 – Communication and Outreach Target Audience Overview

(Original Source: Adapted from – Idaho's Bicycle and Pedestrian Program – Strategic Communications Plan)

Target Audience	Elements Valued	Key Messaging Concepts
Cyclists	<ul style="list-style-type: none"> • Health benefits of cycling • Safety on-road and using trails • Pleasant and relaxing experience • Environment • Budget • Touring alternatives • Flexibility to choose 	<ul style="list-style-type: none"> • Bike safely, be aware of motorists and pedestrians and respect their right to share the road. • Be aware of the rules and regulations on how to cycle safely, and operate a bicycle like you would drive your car. • Biking to work, for recreation or to run errands has a positive impact on your health, the environment and your expenses. • Biking can be a group activity and can enhance social interaction and community building.
Age Group		
Parents	<ul style="list-style-type: none"> • Safety of children • Spending family time together • Budgets • Flexibility with transportation choices for family 	<ul style="list-style-type: none"> • Be a role model for your family members by demonstrating safe cycling practices to your children. While driving, be respectful of those cycling. • Cycling is a fun way to accomplish daily errands, spend time together, encourage a healthy lifestyle, and have a positive impact on your daily expenses and environment. • Get involved, encouraging safe cycling options at schools, workplaces and within the community.
Young Adults (Grade 6 – 12)	<ul style="list-style-type: none"> • Freedom / independence • Fun • Spending time with friends • Health benefits • Promotes a “green” environment 	<ul style="list-style-type: none"> • Be safe while cycling, ride predictably, ride with a properly fitted and certified bicycle helmet and respect motorists. • Cycling is a fun way to spend time with friends and to get your daily level of activity. • Cycling is a good lifestyle habit that you will carry with you for the rest of your life. • Get your parents back on their bikes • It is good practice to walk and bike with a friend.



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Table 5.2 – Communication and Outreach Target Audience Overview

(Original Source: Adapted from – Idaho's Bicycle and Pedestrian Program – Strategic Communications Plan)

Target Audience	Elements Valued	Key Messaging Concepts
Children (Grade K – 5)	<ul style="list-style-type: none"> Spending time with friends / family Fun Accomplishing something on their own Health benefits Promotes a “green” environment 	<ul style="list-style-type: none"> Be safe while cycling. Always ride with a helmet and watch for cars and pedestrians while riding. Always use a crosswalk when crossing at intersections. Stop, look and listen. Never cycle alone. It is good to cycle with a group or friend. Being “self-powered” helps to keep you healthy and is good for the environment.
Seniors	<ul style="list-style-type: none"> Reliability Safety Maintain independence Budget 	<ul style="list-style-type: none"> Be safe while cycling, respect motorists and their right to share the road. Cycling is enjoyable for daily errands, connecting to other transportation options and exercise. Cycling is a fun, safe, environmentally and budget friendly activity to help you maintain your health and independence as you age.
Type of Trip		
Commuters	<ul style="list-style-type: none"> Reliability Safety Maintain independence Pleasant and relaxing Budget / cost savings 	<ul style="list-style-type: none"> Cycling is safe, enjoyable and may be a convenient option for getting to and from work. Cycling to work has a positive impact on your daily expenses, your health and the environment. Cycling with co-workers help enhance moral and social interaction
Visitors	<ul style="list-style-type: none"> Convenience Recreational opportunities Safety Pleasant and relaxing Exploration 	<ul style="list-style-type: none"> The Conservation Areas and Provincial Park found within the Town of Georgina are key destinations for off-road cycling groups Cycling allows visitors to enjoy urban downtowns and organized events within these areas from a unique perspective and may reduce the demand for parking. Knowing the rules and regulations of the road as well as safe use of trails as established by the Province, Region and Town help to make the cycling experience more enjoyable.



It is recommended that this table be used by the proposed Trails & Active Transportation Advisory Committee (see **Section 6.0**) as a reference when refining and confirming potential outreach and promotion initiatives. A key overall assumption regarding the promotion of cycling is that active modes of transportation are generally enjoyable ways for people of all ages and abilities to get around. By respecting each other and improving safety, more people will be able to enjoy the use of on and off-road routes for utilitarian as well as recreational activities.

5.2.2 Potential Communication & Outreach Initiatives

Based on the key assumptions noted above, the following communication and outreach initiatives have been identified for consideration by Town staff, the Inter-Departmental Working Group and the Trails and Active Transportation Advisory Committee in collaboration with key partners.

Education

Guiding Goals & Objectives:

- Making on and off-road cycling information easily available and accessible to people of all ages and abilities using a range of electronic and hard copy materials and tools.
- To prevent disconnect between those who generate the materials and those who the materials are intended to be designed for.
- To ensure that the mobility needs of people of all ages and abilities are not overlooked in transportation and land use planning.
- To enhance the opportunities to spread the word about on and off-road cycling facilities including but not limited to trails.

Education Initiatives for Consideration:

- Work with School Boards, York Region and York Region Public Health to enhance existing promotional and outreach materials and distribute information Town-wide. Use examples of other educational information and programs from other jurisdictions and organizations to develop a suite of Town-specific education materials tailored to local needs.
- Educational information should be developed in a language and style appropriate for the target audience that it is being developed for (e.g. youth or permanent and seasonal residents).



Cycling Education & Bike Repair Program – University of B.C.

Source: freindsoftheubcfarm.wordpress.com

- Develop “guides” or on-going updates regarding the implementation of the trails and active transportation master plan. Topics could include implementation status, facility types, recommended routes etc.
- Engage local trail, snowmobile and active transportation clubs and interest groups to distribute information about the network and educational and promotional information. Local businesses could also be engaged.
- Examine routes being used by children to ensure that they are safe and useable and incorporate the same principles for the design of future routes and identify new potential routes which could be explored as active routes for school aged children.
- Review maintenance programs to ensure they are up to date and provide accessible information to residents regarding current maintenance practices.
- Distribute hardcopy pamphlets and brochures at Town and Regional offices and facilities (e.g. community centres, arenas, libraries, etc.), delivered as part of Town-wide mail outs (e.g. newsletters, resident information, mailings, etc.), distributed at events (e.g. Public Works Weeks, Canada Day, etc.) and circulated through community partners including those engaged as part of the Trails and Active Transportation Advisory Committee.



Education Pilot Project:

Developing a Town-wide Trail and Active Transportation Map

Mapping can be one of the most overlooked opportunities to ‘spread the word’ about active transportation facilities. Maps inform users where the routes are and provide an opportunity to educate trail users through messages such as “rules of the road” and trail user etiquette. Though expensive to produce initially, maps can be updated with the release of new additions as the system grows, making the initial investment pay for itself over time. The GIS Network Management Tool could be used as the basis to develop a Town-wide active transportation and trails map.

Once completed, this document will become an excellent tool to communicate to residents and visitors about the location of trails, provide educational information about tourism destinations, trail and cycling facility etiquette and bicycle friendly facilities. The map can also be used to promote Town as a destination for active forms of recreation use and a place where healthy, active lifestyles can be enjoyed.

To assist in offsetting the cost of producing the trails or AT mapping, many other municipalities have been very successful at selling advertising space on their map. Many have found that once local businesses become aware of the opportunity, they “line up” to have their space on the map as they see the benefit of being associated with an activity that promotes green and active lifestyles. Other additional funding and partnership opportunities have been identified in section 6.4 which could be explored to support the development of a Town map.

The following are some next steps which could be used to undertake the development of a cycling map for the Town of Georgina:

- Adapt the Trails and Active Transportation GIS database into existing Town mapping format Undertake research to identify the audience who would benefit most from a trails and AT map – this can also help to identify potential partners and funding opportunities and inform the design of the map (including the formatting and potential content);
- Discuss internally the types of user groups that the map is intended to target (on-road, off-road, both, tourism, BMX, etc.) – this will help to identify the relevant routes, facilities and destinations to include on the map as well as discussions regarding the scale of the mapping;
- Engage with local businesses, stakeholders and the public – the public will want to have some say in the development of the map, by providing them with the opportunity to give their input you will generate



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a map which will reflect community values and have continued support from Council and members of the public;

- Determine the locations where the map will be made available (online, local retailers, tourism destinations, B&Bs, hotels etc.) – this will help to provide some additional input on design decisions while also maximizing on the potential for advertisement within the community;
- Approach and engage local businesses and municipal / Region partners – in addition to provide input this will provide the Town with another opportunity to identify possible local investment in the map through business advertisement;
- Discuss the types of messaging to be included on the map – the Town should consider the intent of the map and what educational information would be best included in addition to advertisements. Possible information could include key signage information, a how-to guide for on and off-road facilities, proper helmet use and hand signals etc.; and
- Determine the timing of development, printing, launch and distribution – local tourist seasons (i.e. festival season) could be used as a launch point for the map and provide additional exposure for local sponsors while highlighting the local on and off-road facilities.



CanBike2 Course – Providing users with information on where to safely use trail and cycling related infrastructure
Source: stjoh's.ca



Encouragement

Guiding Goals & Objectives:

- To overcome barriers that limit the reach of traditional awareness campaign for key community topics.
- To increase the number of commuter cyclists and trail users to reach future mode share targets and Town goals.

Encouragement Initiatives for Consideration:

- Identify personalized communication techniques where Information is tailored to a target audience's specific needs, with particular information and images. **For example:** the City of Vancouver's "TravelSmart" program provides a form to interested households to request specific materials on select topics that suit their travel needs, such as transit maps, cycling guides, trail maps and bike shop discount coupons. York Region's website for example provides information on bicycle safety and an interactive cycling and multi-use trail map.
- Use word of mouth – people often respond best to information they hear from family, friends or colleagues because it comes from someone they trust. **For example:** the City of Seattle's "In Motion" initiative provided lawn signs to participants who received information about travel options, stimulating conversation within their neighbourhoods about the program.
- Identify ways to overcome specific barriers such as information or initiatives targeted at specific issues or groups that have been identified as significant. **For example:** British Columbia's "Bike Smarts" program provided specific information about bicycle safety to parents and children, since this was identified as the primary concern for parents.
- Create an incentive program and develop contests for employees who walk or cycle to work or explore the development of a bicycle mentoring program that allows employees who want to cycle to work to find a colleague with whom they can share a ride.
- Continue to encourage the use of CANBike courses at local schools or businesses through the program already established by the Region.
- Establish a program to monitor and evaluate route usage as well as public feedback on their experience to continually improve the usage of on and off-road trail and active transportation routes.



- Ensure access to municipally-owned buildings using active forms of transportation by conducting an inventory of trip-end facilities available at these buildings, then create a prioritized schedule to install facilities.
- Gather feedback which demonstrating the outcomes, particularly the positive impacts, or behaviour changes. **For example:** the successes of the City of Boulder's "Go Boulder" program were publicized in local newspapers and on the community television channel, highlighting the results of the program's initiatives aimed at encouraging residents to shift to more sustainable travel modes.

Encouragement Pilot Project:

Develop a Mobile Bike Valet for a Town Event

There are a number of existing events that the Town of Georgina organizes year round which draw a large number of residents and visitors. Typically these attendees drive their cars, in some cases from short distances. This provides a significant opportunity to encourage the use of more active forms of transportation. For local events which occur during the summer months, the Town should explore the organization of a mobile bike valet program. The program would be organized by the Trails and Active Transportation Advisory Committee with logistical input provided by a proposed Inter-Departmental Working Group (see **Section 6.0**).

Coordinated by Town Staff, these groups will be responsible for organizing a program where people can leave their bikes and receive discounts and incentives at local events and to local businesses. The following next steps would need to be explored to facilitate this initiative:

- Once the Trails and Active Transportation Advisory Committee has been established they should work together to explore other communities where this initiative has been successful e.g. Niagara Region.
- The advisory committee with input from key municipal departments should explore and confirm bike valet logistics i.e. volunteer base, space needed and infrastructure such as pylons and barrier tape.
- The advisory committee should reach out to local businesses and event organizers to identify potential incentives which could be used to promote the initiative.
- Once the approach has been confirmed the committee should identify an event that they would like to pilot the pilot project at.



- Once the event has been confirmed, the committee should explore ways in which to promote the bike valet and incentives e.g. local newsletters, posters, online promotion, etc.
- Based on the success of the program the advisory committee should explore other events which could include a bike valet and should work towards making the initiative a mobile approach based on requests from local event organizers and Town staff which could be taken by volunteers to a location as needed.



Milton Street Festival - Source: Town of Milton

Enforcement

Guiding Goals & Objectives:

- To partner and engage with local and Regional enforcement officers (e.g. by-law enforcers, York Regional Police, Conservation Authority Officers etc.) to ensure that ongoing enforcement is facilitated.
- To communicate and promote safe and comfortable trail use and active forms of transportation and recreation Town-wide.

Enforcement Initiatives for Consideration:

- Create patrols and safety blitzes along routes and trails enforcing safe operating procedures for pedestrians, cyclists, and other on-road facility and trail users.
- Collect accurate trail and cycling collision data to help identify any potential problem areas as well as safety and enforcement priorities.
- Develop materials to inform trail users and cyclists about the steps they should take if they are involved in a collision.



- Work with the York Regional Police to develop a Share the Road safety campaign to educate both cyclists and motor vehicle operators on proper and safe cycling. A similar approach should be used as to the program that was developed by the Halton Regional Police Service.

Enforcement Pilot Project:

Develop a Share the Road Safety Campaign

In addition to promoting the use of infrastructure, the Town must also explore initiatives to help enforce and document safe use of the facilities as they are developed. In some cases users act in an unsafe manner on the roads which can lead to conflicts and a decreased level of comfort. The Town collaboratively with the Region is encouraged to explore the development of a Share the Road Safety Program similar to the one established in Oakville, ON.

The program would focus on both cyclists as well as motorists and would stress the importance of respect and sharing the road. The Town should partner with Share the Road Coalition (<http://www.sharetheroad.ca>) as well as the local Police Service and by-law officers to help promote messages of safety.

The Town is encouraged to start with a three-hour safety blitz where motorists and cyclists are approached by regional police, Council representatives (if possible) as well as a representative from the Share the Road Coalition. Once approached, they could be provided with pamphlets with safety tips and information at a key location both on and off-road. The Town should consider developing a program at a major urban areas as well as key recreational destinations such as the ROC. An example of the information which was provided can be found at <http://www.haltonpolice.ca/Pages/Splash.aspx> and should be considered a base from which to develop local information and materials.



Trail Ranger at Work - Source: metroparkstoledo.com

Evaluation

The evaluation of facilities will rely on the development and use of a set of performance measures and evaluation criteria to document existing conditions and to track future improvements or changes. Evaluation of existing facilities as well as those implemented as a result of the master plan is an essential tool to understanding how routes and linkages can be improved and where the successes lie. As the master plan is implemented and the infrastructure is developed, the Town should establish a tracking mechanism to document the existing use and future improvement of routes and facilities. A set of performance measures has been developed for the Town to consider using in the future. Please refer to **section 6.5** for additional details about the proposed performance measures and their use.

Evaluation Pilot Project:

Preparing and Implementing a set of Performance Measures

Once the performance measures have been refined and confirmed by members of the Active Transportation & Trails Advisory Committee or the Inter-Departmental Working Group, the documentation of existing conditions should be undertaken as the evaluation pilot project.

The following are key steps which would need to be undertaken to facilitate the implementation of this pilot project:

- Review and refine performance measures and associated tool with internal staff or with the Trails and Active Transportation Advisory Committee.



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- Identify Town employees or seasonal staff who would be able to undertake the initial exercise of reviewing and document responses to the performance measures. This could include a representative from the LSRCA or a summer student.
- The Town should explore investing in trail counter technology or a short-duration counting program to help supplement the performance measure information. Examples of similar technology have been purchased by communities such as Wellington County to help document current and future trail user.
- Using the base information the performance measures should be updated every 3 – 5 years to document necessary improvement or changes in the use of existing facilities.

Recommendation 5.12:

Partnerships should be explored with York Region, York Tourism, York Region Public Health, York Regional Police Service, School Boards, Share the Road Cycling Coalition and local clubs and interest groups to develop and implement a trail and AT education program.

Recommendation 5.13:

The Town should work with York Region Public Health, School Boards and LSRCA to develop and deliver educational programming related to trails and active transportation.

Recommendation 5.14:

The Town, in partnership with York Region Public Health, School Boards and York Tourism should develop and distribute educational materials such as hard copy newsletters, posters, mapping and promotional materials as well as on-line educational tools and social media messaging geared towards users of all ages and abilities including but not limited to “how-to” guides for safe activities.

Recommendation 5.15:

Develop a wayfinding strategy for on and off-road routes in the Town of Georgina. The strategy would help users navigate the network and inform them about key destinations Town-wide. The Town would also partner with the Region to develop a Regional strategy to ensure continuity and connectivity between the municipalities.

Recommendation 5.16:

A community based social marketing program geared towards the delivery of marketing and encouragement of active transportation and cycling, as well as reduced automobile should be explored and developed by the Town based on the steps identified in the section above.

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**Recommendation 5.17:**

Work with municipal employees to develop internal programming to promote the use of more sustainable forms of transportation for utilitarian purposes.

Recommendation 5.18:

Work with local employers and interest groups to identify potential incentive programs or supportive infrastructure which could help to decrease the use of single occupant vehicles for commuting and increase active transportation and recreation.

Recommendation 5.19:

Work with the Trails and Active Transportation Advisory Committee to develop a bike valet pilot project – Encouragement Pilot Project - at a key public event with the goal of expanding it into a mobile bike parking initiative. The valet parking would be coordinated by the committee and supported by volunteer efforts.

Recommendation 5.20:

Work with the Trails and Active Transportation Advisory Committee, local employers, businesses and representatives from key community destinations to develop a bike parking strategy to help promote trails and active transportation Town-wide. The strategy will be based on a range of design alternatives identified in Appendix C as well as guidelines included in OTM Book 18.

Recommendation 5.21:

Using the GIS information developed for the Trails and Active Transportation Master Plan, the Town should explore the design and development of a trails and active transportation map – Education pilot project. Using the steps identified, the Town should move to develop the map for promotion and tourism purposes which can be printed in hard copy and put online. Collaborate with York Region to develop a Regional scale trail and guide map.

Recommendation 5.22:

Work with the York Regional Police to develop and implement the enforcement pilot project - a Share the Road Safety Campaign similar to the one developed for Halton Region – Safely Sharing Halton's Roadway campaign with specific initiatives targeted to the Town of Georgina.



Recommendation 5.23:

Enforcement activities of the York Regional Police should be supplemented by local by-law enforcement for issues relating to sidewalks, cycling, misuse of cycling facilities and trails and other network amenities. Where the jurisdiction changes, enforcement should be made the responsibility of the conservation authority.

Recommendation 5.24:

Initiate the evaluation pilot project by confirming a set of performance measures which can be used to monitor and evaluate trail and active transportation use, maintenance and conditions. In partnership with the Region the Town is encouraged to explore trail counter technology or a short duration count program to gather input.

5.3 Maintaining the Network

The master plan is both an infrastructure and operations plan. For the purposes of the study operations costs could include.

- Establishing an on-going funding program for implementation;
- Preparing Council progress reports regarding implementation status;
- Working with local partners to develop and deliver safety, education, outreach and promotional programs; and
- Performing network and infrastructure maintenance to achieve a good state of repair.

As such, the Town will require ongoing funding of route, facility and program maintenance to ensure that network elements are sustained over their entire lifespan. Maintenance is currently and should continue to be the responsibility of the Operations and Engineering Department, however as the master plan is implemented, the Town should amend the group's mandate to include all maintenance associated with the Trails and Active Transportation Network consistent with the guidelines identified in **Appendix C**. They should also be responsible for conducting annual reviews of infrastructure conditions to help prioritize maintenance projects.

The Town's Trails and Active Transportation network consists of over 330 km of on-road facilities and 40 km of off-road trails. The incremental cost to maintenance on-road facilities is relatively low compared to standard annual road maintenance budgets.



When determining maintenance costs the Town should consider the following:

- An absolute dollar value for maintenance cost was not calculated for either the on-road or off-road component of the network identified in the master plan as the budget will need to grow incrementally along with the growth of the network.
- As each new section is added, staff should provide a summary of impacts to the operations budget. A dollar amount should be calculated and included in the updated budgeting information for the year.
- Maintenance costs for on-road facilities are estimated to range from \$1,000.00 to \$5,000.00 per km, per year depending on the facility types (paved shoulder with edgelines / signs, bike lanes in urban areas, painted lines vs. thermo plastic stencils, etc.) and economies of scale gained from incorporating cycling facility maintenance in current road maintenance programs.
- Annual maintenance can include but is not limited to line and stencil reapplication, replacement of bike lane and bike route signs, minor asphalt repair (pothole patching and crack sealing), sweeping, snow plowing and replacement of older style catch basin grates with bicycle friendly grates.
- Maintenance of mature off-road multi-use trails in an urban setting, particularly in greenways and parks can range in maintenance cost from \$4,000.00 to \$6,000.00 per km, per year of trail (3.0m width), depending on the level of service standard set out by the municipality.
- Annual maintenance for off-road multi-use trail facilities in urban areas typically includes drainage and storm channel maintenance, sweeping, clearing of debris, trash removal, weed control and vegetation management, mowing of grass along shoulders, minor surface repairs, repairs to trail fixtures and staging areas and other general repair.
- Annual maintenance for off-road multi-use trail facilities in rural areas such as those along abandoned railway lines can be significantly less (e.g. as low as \$300.00 to \$800.00 / km / year).

Typically, a municipality would adjust maintenance budgets based on the number of km of each facility type and increase the maintenance budget accordingly. For example, if 5 kilometres of pavement markings and bike stencils for bike lanes are added, then the annual maintenance budget is adjusted accordingly based on the owner's maintenance performance measures.



PLANNING FOR TRAILS & AT



For all other maintenance related consideration, the Town of Georgina should refer to Appendix C in OTM Book 18: Cycling Facilities. In addition the Town should consider the adoption of the winter maintenance strategies identified in Section C.6 of OTM Book 18: Cycling Facilities.



Maintaining Off-road Cycling Trails
Source: cmbcyukon.ca



Painting Bike Lanes
Source: greenactioncentre.ca

Recommendation 5.25:

Undertake a detailed review of existing Town guidelines regarding on-road and off-road facility maintenance.

Recommendation 5.26:

Conduct a regular (annual) review of physical infrastructure conditions with input from facility users. Report findings to the Inter-Departmental Working Group as part of the process for establishing priorities for on-going maintenance of the trail and active transportation network.

Recommendation 5.27:

Annual maintenance budgets should be refined to fully accommodate the maintenance of on-road and off-road trail and active transportation facilities. The budgets should increase over time to correspond with the increase in the number / length of facilities that have been implemented.

Recommendation 5.28:

The Town of Georgina, through the Inter-Departmental Working Group, should consult on a project by project basis as required with affected agencies.

Recommendation 5.29:

Consider the adoption the maintenance recommendations outlined in Appendix C of OTM Book 18: Cycling Facilities.



5.4 Risk Management & Liability

Liability concerns are becoming a key consideration for municipalities due to the potential for lawsuits. On-road facilities generally fall into the same liability pattern as roadways and sidewalks, meaning that the Town may be held partly liable if the facility is improperly designed, constructed or maintained. Even though trails are separated from roadways they may still be considered a highway since bicycles are legally defined as a vehicle. This is important because should the courts make this interpretation, cycling facilities would be covered under many of the same basic immunities as other highways. It also illustrates the importance of adhering to provincial or national design guidelines (e.g. OTM Book 18) and standards as they will provide the greatest legal protection.

In addition to properly designing and operating facilities, the Town should address potential hazards which could occur (e.g. accidents, thefts, vandalism, etc.). This can become more acute when facilities are along waterways and residential fences. As such, the Town should explore the following methods to reduce risk and minimize liability issues.

- Improve the physical environment, increase public awareness of the right and obligations of users and improve access to educational programs.
- Select, design and designate facilities in compliance with the highest prevailing standards. The design of on-road cycling facilities should be consistent with OTM Book 18. Regulatory signs included in MTO Manual of Uniform Traffic Control Devices should be used.
- Design concept(s) should comply with all applicable laws and regulations (e.g. Ontario Highway Traffic Act, current Town and Regional by-laws etc.).
- Maintenance operations should confirm to acceptable standards (e.g. Town, Region and OTM Book 18). If hazards cannot be removed, they should be isolated with a barrier or notified by clear warning signage.
- Monitor on and off-road facilities on an annual basis to document the physical conditions and operations. All reports of hazardous conditions received should be promptly and thoroughly investigated.
- Written records of all monitoring and maintenance activities should be documented and maintained in Town files.



PLANNING FOR TRAILS & AT



- Avoid using descriptions such as “safe” or “safer” for on or off-road routes when promoting their use. Industry practices suggest that cyclists or facility users prefer to assess their own capabilities or level of comfort and govern their choices accordingly.
- Maintain proper insurance coverage as a safeguard against having to draw payment for damages from the public treasury.
- When considering new Trail segments or AT routes or when proposing modifications to the approved Trails and Master Plan network, document the assessment using a tool similar to the one presented in **Section 4.0** of the Master Plan.
- In support of **Recommendation 5.4**, policies from the Centre for Sustainable Transportation’s Child and Youth Friendly Land Use and Transport Planning Guidelines (Ontario) should also be considered to ensure the unique safety and transportation needs of children and youth are adequately addressed. Examples include:
 - Guideline 5. Explore pedestrian routes used or to be used by children to ensure that they are as usable by them as possible.
 - Guideline 6. Explore pedestrian routes to be used by children to ensure that they are as safe for them as possible.
 - Guideline 8. Separate sidewalks used by children and youth from heavily trafficked roads, particularly where traffic moves slowly or vehicles are stationary with engines idling for long periods.
 - Guideline 12. For destinations to be reached by bicycle, provide separate bicycle paths, and install bicycle lanes on regular roads only as a last resort.
 - Guideline 14. At destinations, provide secure, convenient bicycle parking.

Recommendation 5.30:

The proposed risk management and liability prevention strategies should be reviewed and incorporated into day to day decision making processes when implementing the Trails and Active Transportation Master Plan Update.



6.0 IMPLEMENTATION

The Town of Georgina Trails and Active Transportation Master Plan is intended to guide future decision making when developing and designing Trails and AT facilities. The master plan includes tools, policies and recommendations intended to facilitate implementation.

The strategy developed for the Town of Georgina establishes clear priorities in the short, medium and long term which have been informed by the Town of Georgina and the Regional Municipality of York's capital budgets and strategic planning initiatives.

The policies and recommendations included in the master plan are intended to complement the proposed infrastructure and are to encourage and support trail use and active transportation activities. Encouraging sustainable activity can also be influenced by strategic communication, outreach and promotional materials. In the master plan a set of soft infrastructure initiatives, recommendations and policies have been identified and prioritized (refer to **Chapter 5.0** for additional details on these recommendations).



IMPLEMENTATION



Chapter 6.0 sets out a proposed implementation strategy which is based on a 20+ year phased approach consists of three phases. The phases include:

- Short Term (0 – 5 years)
- Medium Term (6 – 10 years)
- Long Term (11 – 20+ years).

The strategy is supported by a set of tools which are intended to help facilitate the master plan's implementation. These “tools” are identified in Chapter 6.0; and are in addition to several tools already presented in Chapter 5.0.

Table 6.1 summarizes these tools based on key master plan topic areas and identifies where in the report they can be found.

Table 6.1 – Master Plan Implementation Tools

Implementation Tool	Description	Page Number
Roles and Responsibilities	<ul style="list-style-type: none">• An organization chart summarizing the roles and responsibilities structure for Town staff and partners to facilitate implementation.	Section 6.1 Page 6-5
Network Management	<ul style="list-style-type: none">• The use of the GIS data and mapping information to track and document the network development / implementation process.	Section 6.1 Page 6-11
Route Prioritization	<ul style="list-style-type: none">• A set of route implementation / prioritization criteria which can be used by those responsible for the network's implementation when future refinements or iterations are required or additional opportunities arise.	Section 4.1 Page 4-6
Phasing / Implementation	<ul style="list-style-type: none">• Strategic mapping illustrating the recommended phasing of trail and active transportation routes including short, medium and long-term initiatives. Maps 6.1 – 6.2 illustrate the proposed phasing for the network connections.	Section 6.1 Section 6.2 Map 6.1 & Map 6.2
Planning & Design	<ul style="list-style-type: none">• A set of land-use and transportation planning and design strategies that are intended to promote sustainable development and the use of sustainable modes of transportation.	Section 5.1 Page 5-2

IMPLEMENTATION

Table 6.1 – Master Plan Implementation Tools

Implementation Tool	Description	Page Number
Trail and AT Promotion in New Development Areas	<ul style="list-style-type: none"> A set of suggested strategies to promote trail and active transportation facility implementation in new development areas. 	Section 5.1 Page 5-5
Public & Stakeholder Consultation	<ul style="list-style-type: none"> A 4-level approach for public and stakeholder consultation when implementing Trails or AT facilities in older more established neighbourhoods. 	Section 5.1 Page 5-7 Figure 5.3
Maintenance	<ul style="list-style-type: none"> A set of maintenance techniques and risk management and liability strategies to be explored for implementation by the Town. 	Section 5.3 Page 5-25
Communication & Outreach	<ul style="list-style-type: none"> An overview of potential target audiences to be considered when developing communication and outreach initiatives. An overview of the Five-E approach used to develop a robust communication and outreach strategy for the Town of Georgina. A set of education, encouragement, enforcement and evaluation initiatives and pilot projects. 	Section 5.2 Page 5-10
Network Costing	<ul style="list-style-type: none"> A set of unit cost assumptions used to establish the estimated cost of network implementation as well as the communication and outreach strategy and pilot projects. A 20+ year cost estimate for the trails and active transportation network. 	Section 6.3 Page 6-19
Network Funding & Partnerships	<ul style="list-style-type: none"> Potential funding sources which could be explored by the Town when implementing the master plan. A partnership hierarchy to be considered when assessing level of input from external partners during implementation on a project by project basis. 	Section 6.3 Page 6-22
Tracking Implementation	<ul style="list-style-type: none"> A set of performance measures and suggested tools against which the progress of the plan's implementation can be tracked. 	Section 6.4 Page 6-23



6.1 The Implementation Strategy

The Trails and AT Master Plan is more than a network of existing and proposed on and off-road facilities. It includes strategic actions to promote the safe use of active modes of transportation while providing residents and visitors with a range of recreational and commuter transportation opportunities. The master plan can be achieved through the successful implementation of short and long-term actions by the Town through a collaborative effort between key partners and local stakeholders.

The phased implementation strategy outlines a set of proposed initiatives from hard infrastructure to soft infrastructure. Those who are responsible for the plan's implementation will need a strategic set of tools to guide decision making and development. The strategy is intended to be integrated with the Town and Region's existing or planned outreach initiatives as well as work which has been completed by local interest groups and influential stakeholders.

Recommendation 6.1:

The 20+ year implementation plan included in the master plan should be adopted in principle and used to guide the implementation of the network over time.

Recommendation 6.2:

The implementation and development of the trails and active transportation network should be coordinated with the capital works plan developed by the Town and York Region (for those Regional Roads which form part of the Trails and AT network).

The tools outlined in Chapter 6.0 should be considered by the Town of Georgina staff and integrated into day to day planning and development processes. The following sections outlines additional details regarding some of the tools noted in **Table 6.1**. They have been developed based on an understanding of current Town processes and existing municipal structures.



IMPLEMENTATION

6.1.1 A Coordinated Approach

Master plan implementation will require champions, partnerships and leadership. Maximizing participation and removing obstacles to the flow of information between those individuals responsible for the plan's implementation will help to ensure that the master plan moves from the planning and design stage to funding and development.

An efficient reporting and implementation structure is vital to a smooth and effective decision-making process. A structure which is managed properly and involves all relevant Town departments, Regional and LSRCA staff and external stakeholders is typically known to have the greatest success rate.

The study team reviewed existing municipal processes and structures and have established a suggested reporting structure for managing the master plan's implementation. **Figure 6.1** illustrates the structure which should be reviewed and adapted as necessary by Town staff and ultimately applied as the preferred approach for decision making regarding the implementation of the Trails and AT Master Plan.

Implementation will be successful if there is ongoing communication and collaboration between all Town departments and the Town's partners. It is their combined efforts that will ensure that hard and soft infrastructure initiatives are implemented in a fiscally responsible manner. **Table 6.2** identifies the department specific roles and responsibilities.



Trail Entrance to York Regional Forest Tract – Pfefferlaw Tract – Source: MMM Group



IMPLEMENTATION

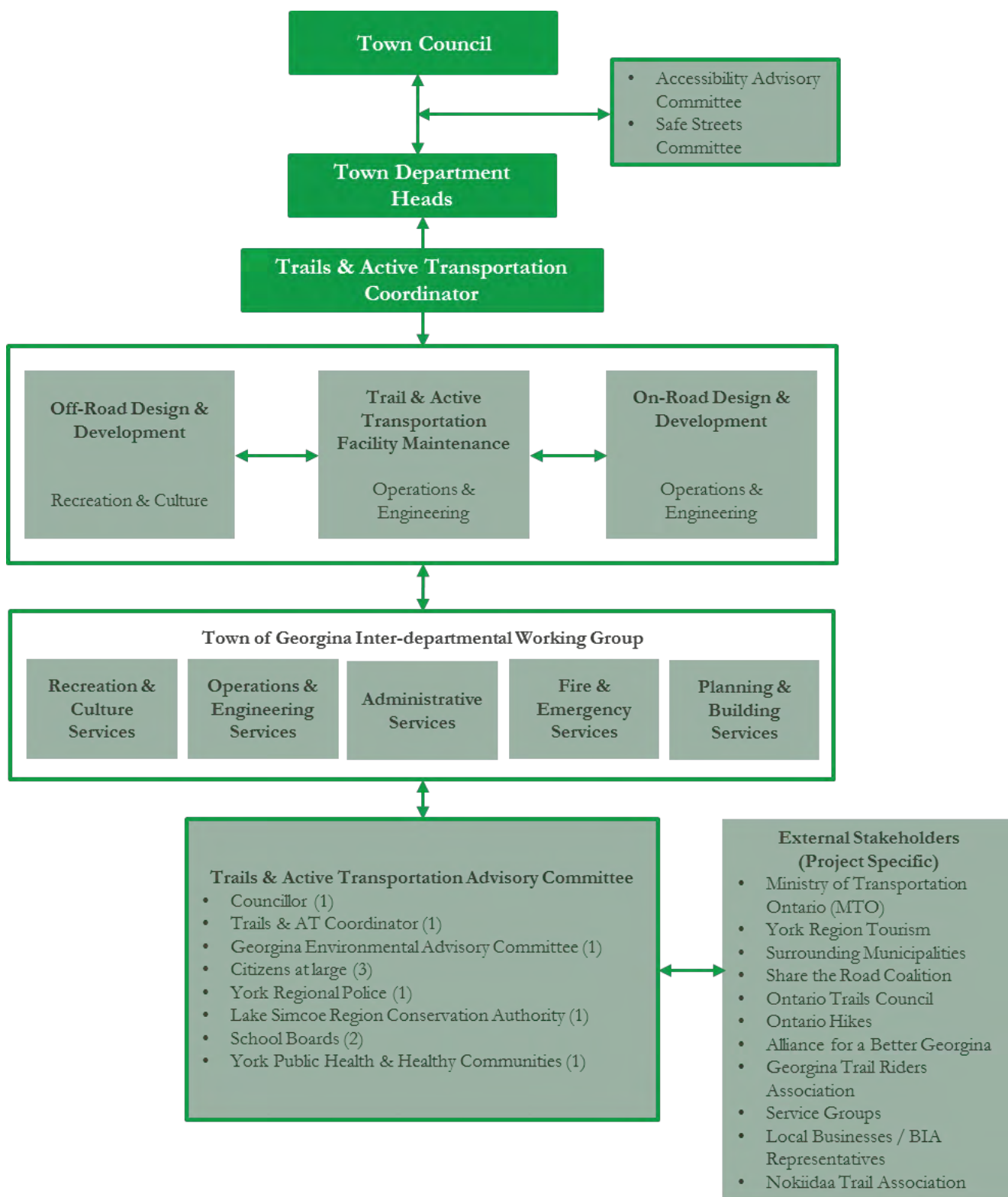


Figure 6.1 – Suggested Reporting Structure for the Trails and AT Master Plan Implementation
Source: MMM Group

IMPLEMENTATION

Table 6.2 – Town Department Roles and Responsibilities Reference Table

Roles & Responsibilities	Town of Georgina Departments				
	Admin Services	Operations & Engineering	Recreation & Culture	Fire & Emergency Services	Planning & Building
Off-road Facility Design			✓		
Off-road Facility Development			✓		✓
On-Road Facility Design		✓			
On-Road Development		✓			✓
Route Signage	✓	✓	✓		
Network Phasing		✓	✓		✓
Maintenance		✓	✓		
Site Plan Assessment		✓	✓		✓
By-law Development					✓
Policy Development		✓	✓		✓
Enforcement	Implemented by by-law officers (Town) and York Regional Police Service				
Budgeting	✓	✓	✓		✓
Communication & Outreach	✓	✓	✓	✓	
Branding & Promotion	✓	✓	✓	✓	

The suggested reporting structure identifies a number of key Town staff / groups who are expected to have a role in the implementation of the plan. Many identified were engaged over the course of the development of the master plan either as key study contacts or members of the study steering committee. These individuals, once confirmed, will be responsible for “championing” the implementation of the master plan. The roles and responsibilities have been described in further detail below:

- **Trails & Active Transportation Coordinator:**
 - An existing staff member assigned the responsibility of coordinating master plan implementation. First step would be to assign the role and responsibility to an existing position and then expanding it into a full-time position when and if the level of effort requires additional staff resources (e.g. York Region Active Transportation, Town of Ajax Active Transportation Coordinator, Town of Milton Cycling Lead or Halton Region Active Transportation and TDM Coordinator).
 - The appropriate Town department would be confirmed (e.g. Recreation & Culture) and an individual would be selected.



IMPLEMENTATION



- The individual would be supported by the on and off-road development and design and maintenance leads.
- Responsible for communicating and coordinating with the Inter-Departmental Working Group and hold the position of staff lead for the Trails and Active Transportation Advisory Committee.
- Responsible for providing annual or bi-annual updates to Council on the status of master plan implementation.
- Hold the position of liaison with the public and other external stakeholders on a project by project basis.
- **Off-road Design & Development Lead:**
 - An existing staff member selected from the recreation and culture department will be assigned the responsibility of tracking the implementation of off-road projects.
 - Will work with the active transportation and trail coordinator and the inter-departmental working group / trails and active transportation advisory committee to select preferred / priority projects for implementation.
 - Will be responsible for moving projects forward to detailed design and implementation using the proposed 5-step implementation tool once confirmed.
 - Will provide updates to the trails and active transportation advisory committee regarding off-road opportunities as they arise.
- **On-Road Design & Development Lead:**
 - An existing staff member selected from the operations and engineering department will be assigned the responsibility of tracking the implementation of on-road projects.
 - Will work with the trails and active transportation coordinator and the inter-departmental working group / trails and active transportation advisory committee to select preferred / priority projects for implementation.
 - Will be responsible for moving projects forward to detailed design and implementation using the 5-step implementation tool once confirmed and will provide input to Regional projects for Regional roads within the Town.
 - Will provide updates to the trails and active transportation advisory committee regarding on-road opportunities as they arise.



IMPLEMENTATION



- **Maintenance Lead:**
 - An existing staff member selected from the operations and engineering department will be responsible for determining and addressing maintenance related practices and issues.
 - Will work with the on-road and off-road design and development leads, the inter-departmental working group and the trails and active transportation advisory committee to confirm the preferred approach for maintenance and identify alternative / additional practices.
 - Will be responsible for undertaking an annual review of current trail and active transportation facility conditions and adapt maintenance practices as necessary.
- **Inter-Departmental Working Group:**
 - Working group would include representatives from the study steering committee but would be enhanced to include representatives from other Town departments, as required.
 - The group would meet on a regular basis (e.g. quarterly or semi-annually) to review and discuss trail and active transportation projects as well as other opportunities as they became available.
 - The group will be responsible for tracking the master plan's implementation and may help the trails and active transportation coordinator with updates to Council as necessary.
- **Trails & Active Transportation Advisory Committee:**
 - Building on some of the study contacts and interest groups which emerged over the course of the study a Trails and Active Transportation Advisory committee will be established.
 - The committee would meet on a regular basis (e.g. monthly) to discuss potential promotion and outreach opportunities as well as the prioritization of network projects.
 - Their input would inform decision making which would be confirmed by the Inter-Departmental Working Group, the trails and active transportation coordinator and select department heads.
- **External Stakeholders:**
 - There may be some instances where the Trails & AT Advisory Committee may require additional input from select stakeholders. A list of potential stakeholders has been included in the reporting structure for consideration by the committee members.



IMPLEMENTATION



As necessary, representatives from these agencies may be contacted and asked to attend a committee meeting to discuss issues on a project by project basis.

Though considerable time and effort has been put into developing roles and responsibilities which build on existing municipal practices and structures; it is the responsibility of the Town to confirm and adopt these practices so they are engrained into municipal process and culture.

Recommendation 6.3:

The proposed organization structure including the roles and responsibilities should be adopted as a guide for the implementation of the master plan and should be used when identifying department leads on a project by project basis.

Recommendation 6.4:

Identify an existing staff member who will oversee the transition between the finalization of the master plan and the implementation of initial projects / initiatives. This staff member will hold the role of a trails and active transportation coordinator. In addition to overseeing the master plan's implementation they will also provide updates to internal and external stakeholders as necessary.

Recommendation 6.5:

Once the master plan has been adopted the Town is encouraged to identify a lead staff member from the engineering and operations department and the recreation and culture department to hold the positions of on and off-road design and development leads.

Recommendation 6.6:

The on and off-road design and development leads will be supported by a representative from the engineering and operations department who will be responsible for the maintenance of both on and off-road systems and facilities.

Recommendation 6.7:

An inter-departmental working group made up of representatives from each of the Town's departments should be established. The working group will help to inform the decision making process for the plan's implementation.

Recommendation 6.8:

The inter-departmental working group should develop a terms of reference and should meet regularly (i.e. quarterly or more frequently if required) to provide updates on the implementation of the plan and to address next steps.



IMPLEMENTATION



Recommendation 6.9:

A trails and active transportation advisory committee should be established following the adoption of the master plan. The advisory committee will be made up of town, regional, stakeholders and local residents.

Recommendation 6.10:

A terms of reference should be prepared for the trails and active transportation advisory committee. It is recommended that the group meet on a regular basis (e.g. quarterly) to review and discuss the implementation of the plan and provide input to the selection of priority projects.

Recommendation 6.11:

As a project moves forward the trails and active transportation advisory committee should explore the possibility of engaging additional external stakeholders as necessary. For example, this would apply if an opportunity arose in the provincial park or the lands regulated by the Lake Simcoe Region Conservation Authority.

6.1.2 A Network Management Tool

The GIS database provided by the Town of Georgina has been updated to reflect the propose Trails and AT Network. The updated GIS database can be used to track the implementation of the plan and to document municipal assets. It can also be overlaid on Google Earth (digital aerial photography) in a KML format so all staff and the public can view the network map.

The inter-departmental working group is encouraged to use the tool to help confirm the feasibility of facilities along with the proposed phasing. The tool can be used to document the implementation of new segments by updating the “facilities” component of the database. By consistently updating the database with relevant information on an ongoing basis, the cost associated with updating the master plan will be significantly reduced (the Town of Georgina should update their master plan every five years).

In addition to being a network management and tracking tool the GIS database, with some supplementary formatting could be used to develop a Town-wide trails or active transportation map (see recommendation to develop Town-wide map in **Chapter 5.0**). The information should also be used when the Region next updates their cycling map. If developed, the mapping should be provided in an accessible format – both hard copy and electronic – to facilitate the distribution of information Town-wide to people of all ages and abilities.

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Trails & Active Transportation Master Plan



IMPLEMENTATION



A trail or AT map would also help to increase trail and cycling tourism opportunities as the number of seasonal residents and tourists increases during the summer months.

Recommendation 6.12:

The GIS database developed during the preparation of the master plan should be integrated with the Town's existing GIS database and regularly updated as part of network tracking, management and budgeting during the implementation of the master plan. This will reduce the cost of future updates.

Recommendation 6.13:

The updated GIS database should be used to develop a trails or active transportation map geared towards tourism / community branding for the Town.

Recommendation 6.14:

The updated GIS database should be provided to the Region to update their Regional cycling map or other tourism / promotional materials with mapping included on it.

6.1.3 A Five-Step Implementation Plan

The master plan is not intended as a static document. The route alignment and phasing should and will evolve through the environmental assessment, planning, design and budgeting process. Once adopted, the master plan should be updated every five years to reflect the changes made to the network.

In order to facilitate the implementation of the plan a consistent process is needed to guide network design and development over the next 20+ years. An implementation tool has been developed which should be reviewed and confirmed by the Trails and AT coordinator, the on and off-road development and design leads and the inter-departmental working group. The tool has been developed to reflect current planning and design practices and approaches and should be updated, where necessary, to reflect future changes / adaptations.

The tool is made up of five parts and is a step-by-step guide to confirming route feasibility when the Town proceeds with implementation. The tool encourages collaboration between affected Town departments to ensure successful implementation and should help inform inter-departmental working group discussions. The tool is described in further detail in **Appendix E**.



IMPLEMENTATION

When working through the implementation tool, the Town should consider the following:

- There may be applicable municipal policies / plans e.g. the Town's Official Plan which may need to be updated to reflect the network and policies included in the Trails and AT Master Plan.
- Some segments may fall under the jurisdiction of the Regional Municipality of York or the Lake Simcoe Regional Conservation Authority. The Town should work with these stakeholders to adhere to a consistent implementation process.
- The master plan should be given consideration when municipal or regional roads and other capital infrastructure projects are identified and scheduled (e.g. asset management programs for construction, resurfacing of roads, investigation of potential new road alignments or the use and / or sale of abandoned rail and utility corridors). Roads which have been identified for the implementation of an on-road facility should be given due regard when proceeding with the planning, design and budgeting for a project. If through the design and/or budget process a decision is made to either not include a proposed network link or to proceed with an alternative facility type, this should be documented.

Recommendation 6.15:

The inter-departmental working group should review and consider the use of the five-step implementation tool when undertaking the next steps to develop components of the trails and active transportation master plan.

Recommendation 6.16:

The Trails & AT Master Plan should be reviewed and given consideration when town or regional roads (identified in the Town's trails and active transportation master plan and the Region's pedestrian and cycling master plan) and other capital infrastructure projects are identified and scheduled.



Opportunities for On-Road and Off-road Trail and AT Connections – Source: MMM Group

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6.2 Trails & AT Network Phasing

Network phasing has been established based on a 20+ year full build out assumption. Though long-term build out has been identified, the Town should focus on the short-term priorities scheduled for implementation in the first five years with the necessary updates / alternations to be made when the master plan is updated.

Maps 6.1 and **6.2** illustrate the proposed short, medium and long-term phasing for the Town of Georgina Trails and AT Network. The phasing which has been identified is reflective of when the project is anticipated to be completed.

In some cases, the initiation date of some projects may occur in an earlier phase. For projects which may be more intensive, the duration of the project from start to finish may span more than one phase. The implementation schedule should be considered a flexible tool and should be adapted based on available budgets and priorities identified by Town staff and confirmed by Council through annual budget deliberations.

Once network implementation has commenced, the Town may require additional direction to help prioritize route implementation. The Town is encouraged to use the route rationalization / prioritization criteria and ranking approach identified in **Chapter 4.0**. The Town is encouraged to adopt the implementation schedule to guide the development and prioritization of Trail and AT projects. The Town should use the route rationalization and prioritization tool when annual network priorities are being reviewed and / or updated by the inter-departmental working group and / or the Trails and AT Advisory Committee.

Recommendation 6.17:

The proposed network phasing illustrated in Maps 6.1 and 6.2 should be used as the Town's primary reference when addressing network implementation. The map can also be used as a tracking tool over the course of the implementation process to document those routes which have been developed.



IMPLEMENTATION

6.2.1 Identifying Short Term Priorities

Table 6.3 identifies each of the master plan's short-term initiatives which have been organized based on facility type and jurisdiction (Region, Town or conservation authority). In addition to **Maps 6.1** and **6.2**, this table should be used by Town staff and those responsible for the master plan's implementation as a network tracking tool.

Table 6.3 – Short-Term Trail and Active Transportation Priorities

Short-Term Initiative & Description	Town	Region	Regional Lake to Lake Route
Proposed Signed Route			
Ravenshoe Rd. – Town Boundary to The Queensway South		✓	
Lake Drive S / Bayview Ave. – Ravenshoe Rd. to The Queensway South		✓	
Joe Dales Dr. – The Queensway South east to Proposed Road	✓		
Thornlodge Dr. – Ravenshoe Road north to Proposed Road	✓		
Proposed Road at Joe Dales Dr. terminus to Ravenshoe Rd.	✓		
Proposed Road – Thornlodge Dr. to The Queensway South	✓		
Annshiela Dr. – Lake Drive S. to The Queensway S.	✓		
Glenwoods Ave. – Lake Drive S. to The Queensway South	✓		
Glenwoods Ave. – The Queensway South to Woodbine Ave.		✓	
Elm Ave. / Dovedale Dr. – Lake Drive S. west to Existing multi-use trail	✓		
Roselm Ave. – Biscayne Blvd. south to existing multi-use trail	✓		
Hodgins Ave. – Biscayne Blvd. to Riverglen Dr.	✓		
Campion Crt. – Hodgins Ave. west to existing multi-use trail	✓		
Riveredge Dr. – The Queensway South to Woodbine Ave.	✓		



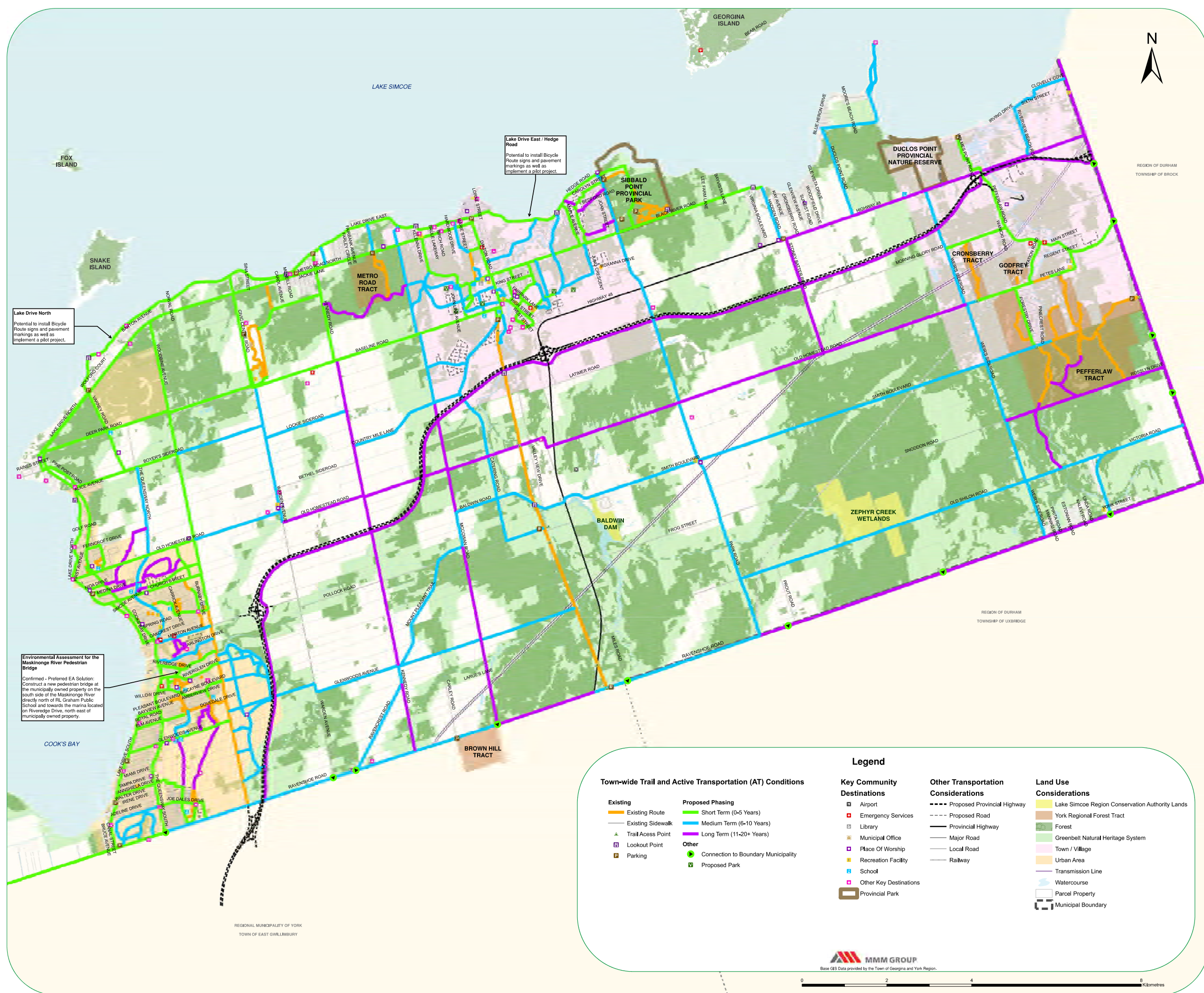
IMPLEMENTATION



Table 6.3 – Short-Term Trail and Active Transportation Priorities

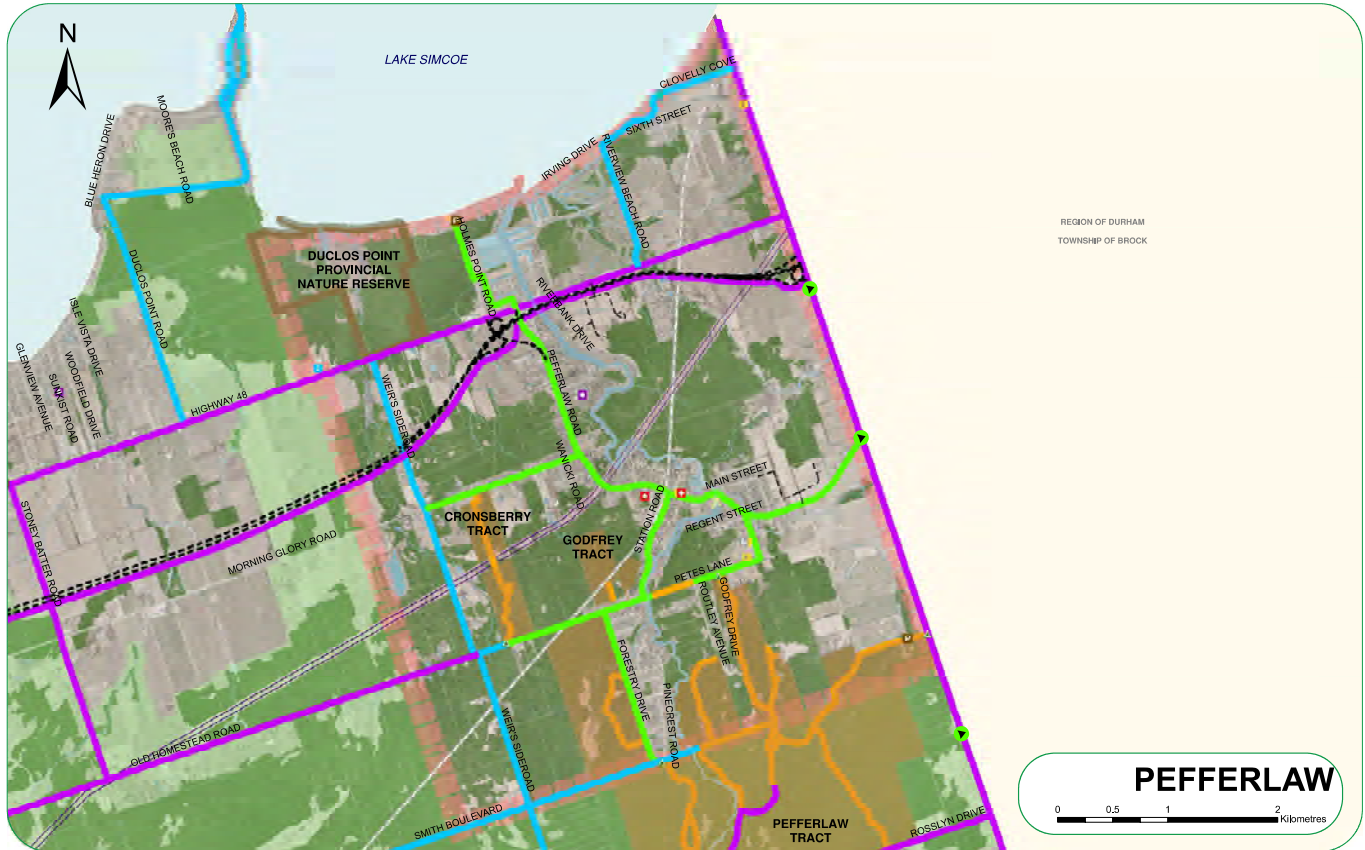
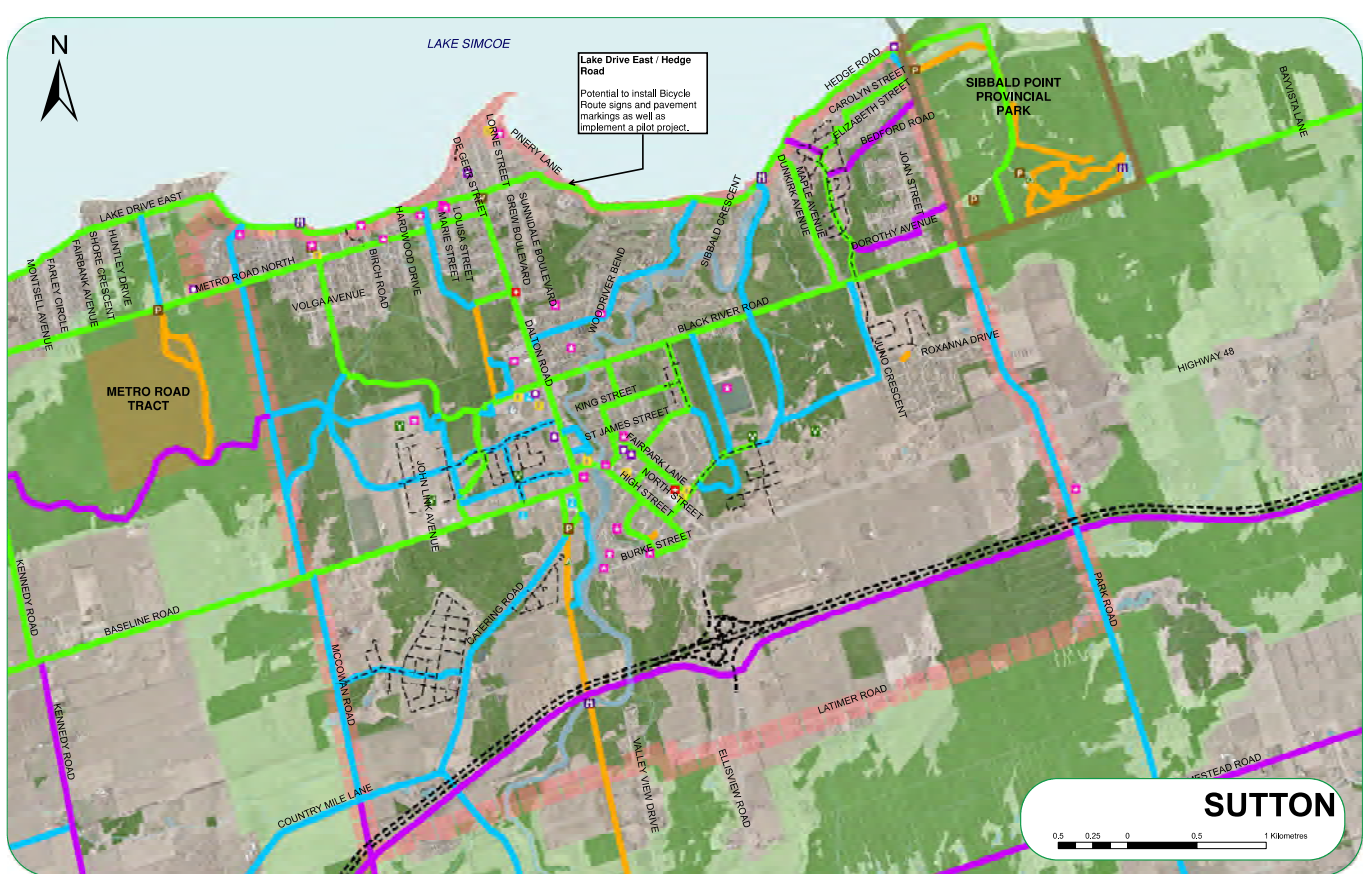
Short-Term Initiative & Description	Town	Region	Regional Lake to Lake Route
Cooks Bay Dr. – Church St. to Metro Rd. S.	✓		
Circle Ridge Dr. – The Queensway South east to the existing multi-use trail	✓		
Fontaine Dr. – Existing multi-use trail to Carrick Ave.	✓		
Burnaby Dr. – Wexford Dr. north to existing multi-use trail	✓		
Church St. – Woodbine Ave. to Lake Drive North0	✓		
Proposed Road – Woodbine Ave. west to terminus	✓		
Proposed Road – Church St. to Old Homestead Rd.	✓		
Rayners Rd. / Medina Ave. – Lake Drive North to Metro Rd. N.	✓		
Nida Dr. – Lake Drive North to Metro Rd. N.	✓		
Old Homestead Rd. – Lake Drive North to Metro Rd. N.	✓		
Old Homestead Rd. – Metro Rd. N. to Woodbine Ave.		✓	
Hattie Crt. – Existing multi-use trail to Old Homestead Rd.			
Metro Rd. N / S – Morton Ave. to Elmview Gardnes		✓	
Metro Rd. N. – Salvation Army Rd. to approximately 20 metres east of Salvation Army Rd.		✓	
Lake Drive North / East – Church St. to Hedge Rd.	✓		
Hedge Rd. – Lake Drive East to Park Rd.	✓		
Boyer's Sideroad – Metro Rd. N. to Woodbine Ave.	✓		
Mahoney Dr. – Kennedy Rd. to road terminus	✓		
Metro Rd. N. – Alexander Blvd. to Dalton Rd.		✓	

MAP 6.1
PROPOSED PHASING
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY

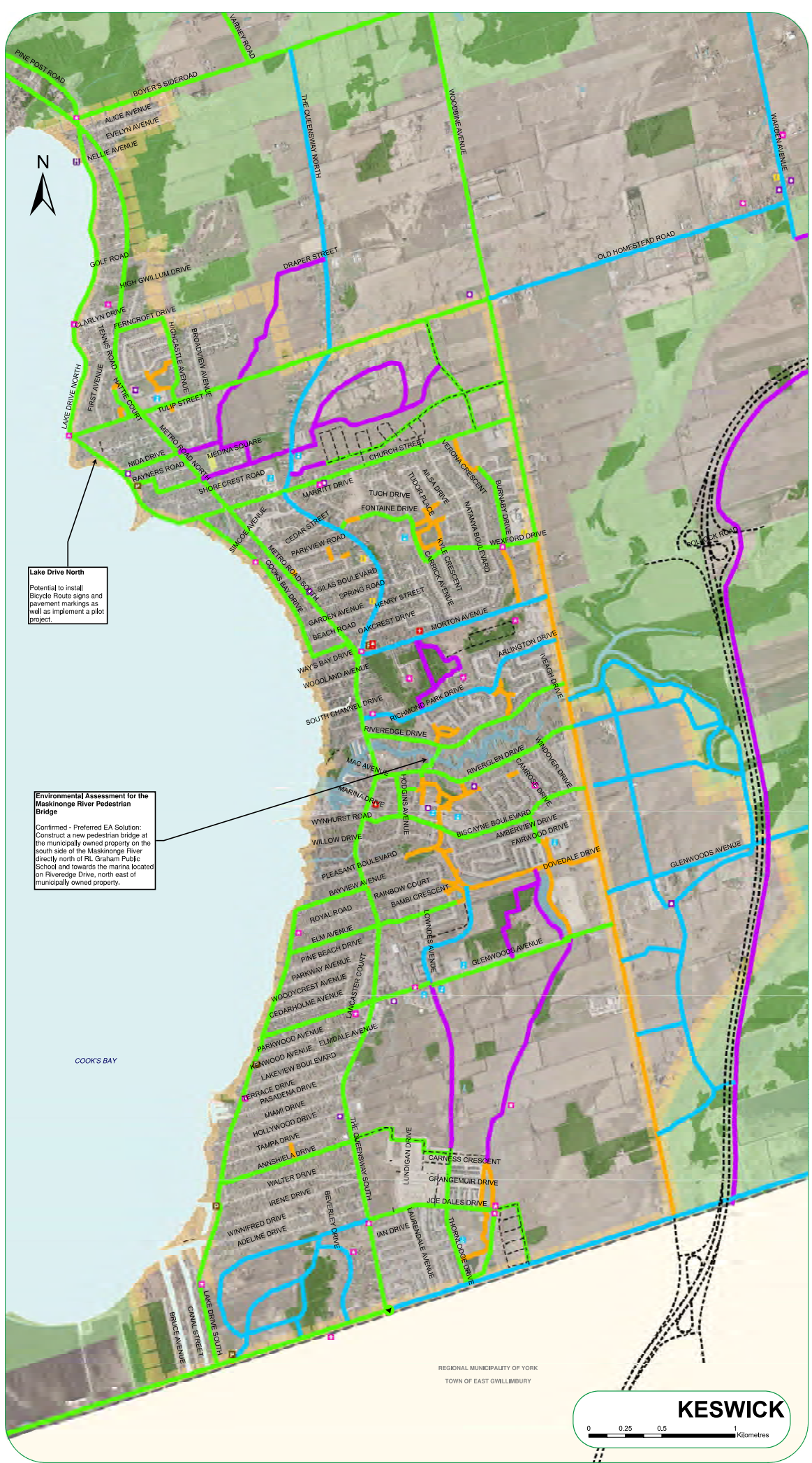


FINAL MAY 2014

MAP 6.2
PROPOSED PHASING
TOWN OF GEORGINA
TRAILS & ACTIVE TRANSPORTATION MASTER PLAN STUDY



- Legend**
- | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Town-wide Trail and Active Transportation (AT) Conditions | Key Community Destinations | Other Transportation Considerations | Land Use Considerations |
| Existing
Existing Route
Existing Sidewalk
Trail Access Point
Lookout Point
Parking | Airport
Emergency Services
Library
Municipal Office
Place Of Worship
Recreation Facility
School
Other Key Destinations
Provincial Park | Proposed Provincial Highway
Proposed Road
Railway | Lake Simcoe Region Conservation Authority Lands
York Regional Forest Tract
Forest
Greenbelt Natural Heritage System
Town / Village
Urban Area
Transmission Line
Watercourse
Parcel Property |
| Proposed Phasing
Short Term (0-5 Years)
Medium Term (6-10 Years)
Long Term (11-20+ Years)
Other
Connection to Boundary Municipality
Proposed Park | | | |





IMPLEMENTATION



Table 6.3 – Short-Term Trail and Active Transportation Priorities

Short-Term Initiative & Description	Town	Region	Regional Lake to Lake Route
Alexander Blvd. – Metro Rd. N. to road terminus	✓		
Dalton Rd. – Metro Rd. N. to Black River Rd.		✓	
Allen Dr. – Dalton Rd. to road terminus	✓		
Black River Rd. – Dalton Rd. to road terminus	✓		
West St. / Burke St. to High St.	✓		
Hawkins St. – High St. to proposed Hawkins St. extension	✓		
Proposed Hawkins St. extension	✓		
Fairpark Ln / St. James St. – Hawkins St. to River St.	✓		
Middle St. – Fairpark Ln. to High St.	✓		
Market St. – Fairpark Ln. to proposed multi-use trail	✓		
River St. – High St. to King St.	✓		
King St. – River St. to proposed road	✓		
Queen St. – Black River Rd. to King St.	✓		
Proposed Road – Black River Rd. to proposed multi-use trail	✓		
Black River Rd. – Dalton Rd. to approximately 1 kilometre east of Dalton Rd.		✓	
Maple Ave. – Hedge Rd. to Black River Rd.	✓		
Carolyn St. / George Rd. / Douglas St. / Proposed Road – Park Rd. to Black River Rd.	✓		
Existing road in Sibbald Point Provincial Park			✓
Black River Rd. – Park Rd. to Hadden Rd.	✓		
Holmes Point Rd. / Moorings Rd. – Holmes Point Rd. to Highway 48	✓		



IMPLEMENTATION



Table 6.3 – Short-Term Trail and Active Transportation Priorities

Short-Term Initiative & Description	Town	Region	Regional Lake to Lake Route
Pefferlaw Rd. – Station Rd. to Petes Ln.		✓	
Petes Ln. – Pefferlaw Rd. to Routley Ave.	✓		
Station Rd. – Pefferlaw Rd. to Old Homestead Rd.	✓		
Forestry Dr. – Old Homestead Rd. south to existing trail in Pefferlaw Tract.	✓		
Proposed Signage on Existing Multi-Use Trail			
The Queensway South. – Ravenshoe Rd. to Morton Ave.		✓	
Proposed Multi-Use Trail			
Off-road multi-use trail connecting Thornlodge Dr. to Joe Dales Dr.	✓		
Proposed Multi-use trail on the proposed Maskinonge River Pedestrian Bridge	✓		
Proposed in-boulevard multi-use trail along the north side of Baseline Rd. – Woodbine Ave. to Civic Centre Rd.	✓		
Off-road multi-use trail connecting Civic Centre Rd. to existing trails in the ROC.	✓		
Proposed in-boulevard multi-use trail along Civic Centre Rd. north to existing trails in the ROC.	✓		
Proposed In-boulevard multi-use trail along Dalton Rd.– Black River Rd. to Baseline Rd.	✓		
Proposed multi-use trail from Alexander Blvd. to Baseline Rd.	✓		
Proposed multi-use trail from Black River Rd. terminus to other proposed multi-use trail.	✓		
Proposed In-boulevard multi-use trail along Dalton Rd – Baseline Rd. to Sutton-Zephyr Rail Trail	✓		



IMPLEMENTATION



Table 6.3 – Short-Term Trail and Active Transportation Priorities

Short-Term Initiative & Description	Town	Region	Regional Lake to Lake Route
Proposed off-road multi-use trail connecting Douglas St west to proposed roads.	✓		
Proposed off-road multi-use trail from existing road in Sibbald Point Provincial Park to Black River Road			✓
Proposed off-road multi-use trail – Station Rd. east to existing multi-use trail.	✓		
Proposed Edgeline with Signed-only Bicycle Route			
Biscayne Blvd. – The Queensway S. to Woodbine Ave.	✓		
Carrick Ave. / Wexford Dr. – Fontaine Dr. to Woodbine Ave.	✓		
Ferncroft Dr. / Highcastle Ave. – Metro Rd. N. to Old Homestead Rd.	✓		
Proposed Signed Route on Existing Paved Shoulder			
Woodbine Ave. – Wexford Dr. to paved shoulder terminus		✓	
Woodbine Ave. – Approximately 205 metres north of Church St. to approximately 330 metres south of Baseline Rd.		✓	
Metro Rd. N. – Elmview Gardens to Lennox Ave.		✓	
Metro Rd. N. – Sheppard Ave. to Salvation Army Rd.		✓	
Metro Rd. N. – Approximately 20 metres east of Salvation Army Rd. to Alexander Blvd.		✓	
Woodbine Ave. – Deer Park Rd. to Metro Rd. N.		✓	
Kennedy Rd. – Metro Rd. N. to Baseline Rd.		✓	
Baseline Rd. – McCowan Rd. to Dalton Rd.		✓	
Black River Rd. – Approximately 1 kilometre east of Dalton Rd. to Park Rd.		✓	



IMPLEMENTATION



Table 6.3 – Short-Term Trail and Active Transportation Priorities

Short-Term Initiative & Description	Town	Region	Regional Lake to Lake Route
Pefferlaw Rd. – Memory Ln. to Florence Dr.		✓	
Pefferlaw Rd. – Petes Ln. to Town Boundary.			
Proposed Paved Shoulder			
Metro Rd. N. – Lennox Ave. to Sheppard Ave.		✓	
Woodbine Ave. – Approximately 330 metres south of Baseline Rd. to Deer Park Rd.		✓	
Baseline Rd. – Civic Centre Rd. to McCowan Rd.		✓	
Pefferlaw Rd. – Highway 48 to Memory Ln.		✓	
Pefferlaw Rd. – Florence Dr. to Station Rd.		✓	
Old Homestead Rd. – Station Rd. west to existing multi-use trail in Cronsberry Tract		✓	
Proposed Bike Lane			
Woodbine Ave. – Approximately 190 metres south of Church St. to approximately 205 metres north of Church St.		✓	
High St. – Dalton Rd. to West St.		✓	
Proposed Sharrow			
High St. – West St. to Burke St.		✓	
Desired Connection			
Mahoney Dr. extension to existing multi-use trail in The ROC.	✓		
Baseline Rd. to Sutton-Zephyr Rail Trail	✓		
Mahoney Dr. extension – Terminus of Mahoney Dr. to existing multi-use trail	✓		



IMPLEMENTATION



Investigating a Pilot Project

Input provided by members of the public and local stakeholders indicated a strong demand for the recommendation of a more formal pedestrian and cycling facility along Lake Drive during the peak summer season. As such, the study team has identified this particular linkage as a short-term pilot project which should be considered for implementation on a temporary basis to confirm its viability and feasibility as part of the network. It is proposed that a 1.7km section of Lake Drive North from Salvation Army Road to Dalton Road be considered for the Pilot.

For the design of this linkage, there are two specific options which are to be considered with a preference for one alternative. The first option, which was identified by several residents and the study team, is to convert part of Lake Drive from a two-way to one-way road for motorists from June through October. This would allow a motor vehicle lane to be converted into a separated pedestrian and cycling facility located side of the roadway abutting the shoreline of Lake Simcoe.

The design of such a facility could include the implementation of a mixed-use pathway set back from the roadway that would be enhanced through the implementation of route signage and separation between motor vehicles and cyclists / pedestrians (e.g. temporary or other delineators). The second option calls for the reduction of speeds along this linkage with the application of sharrows to identify the shared space between cyclists and motorists along the roadway. However input received and further investigation in the field has identified the first alternative as the preferred option pending additional discussions and approval with Council.

In order to fund the proposed Pilot Project, the Town may wish to leverage the work already completed for the Lake to Lake Cycling Route and Walking Study, and seek funding from the Regional Municipality of York. As an initial next step, it is recommended that the Town initiate discussions with the Region and explore the opportunity of future partnerships with Regional staff to explore the development of this key section in the Town's Trails and AT network which is also considered a future Regional / provincially significant linkage.



IMPLEMENTATION



The short-term priorities identified in Table 6.3 were developed based on the following considerations:

- **Coordinating with Capital Projects:** Regional and Town capital projects were reviewed and considered to maximize cost savings by working in tandem with planned capital roads and infrastructure projects. Trail and AT facilities were also identified in conjunction with other capital infrastructure projects such as road rehabilitations and reconstructions and the construction of new roads and linear utilities (e.g. underground gas lines, water supply lines and sewers).
- **Closing Gaps:** Short gaps in the existing network which could easily be completed were identified, specifically those which resulted in a continuous route and / or important link.
- **Linking Significant Trails:** Connections to regionally, provincially or nationally significant trail systems were considered a tourism priority.
- **Engaging Partners:** Local partners were engaged to facilitate the development of routes as part of new land development agreements at the time of construction as opposed to retrofitting existing neighbourhoods.
- **Reallocating Space:** Where possible on-road facilities were developed through lane reallocation and repainting of pavement markings.
- **Responding to Demand:** Areas where active transportation volumes are the highest and / or where there is the highest demand anticipated were considered a strategic priority (e.g. routes that facilitate access to key destinations, especially those that have the potential to attract the greatest number of pedestrians and cyclists).
- **Prioritizing Routes:** Routes were identified based on input from the steering committee as well as members of the public and local stakeholders who were engaged in the consultation / engagement activities over the course of the study process.
- **Establishing Spine Routes and Touring Loops:** The goal was to strategically identify a set of routes which together form spine routes and touring loops connecting the urban and rural areas of the Town of Georgina as well as connections to surrounding municipalities through north-south and east-west connections.

Recommendation 6.18:

The short-term initiatives identified in **Table 6.3** and illustrated on **Maps 6.1** and **6.2** should be used to guide implementation during the first five years of the master plan's implementation.



IMPLEMENTATION



6.2.2 Network Amenities – Complementing the Network

Network continuity, connectivity and feasibility are further enhanced through the implementation of network amenities. In some cases, amenities can be the factor which makes an individual decide whether or not to make a trip using an active mode of transportation. Network amenities can reinforce the Town's commitment to promoting trails and active forms of transportation and may include lighting, sitting / rest areas, parking areas, signage, bicycle parking, loading / unloading areas, garbage receptacles, washroom and amenity buildings and gates / access barriers.

Network amenities can be implemented individually or as a grouping of amenities which is more typically known as a staging area. Network amenities, staging areas and end-of-trip facilities meet a critical need for cyclists, pedestrians and other trail users and are also significant opportunities for the Town to engage in partnerships with local organizations, services and businesses.

In the urban areas of the Town of Georgina, staging areas could be integrated into many of the existing park spaces and tourist destinations along the waterfront (e.g. beaches). In the rural areas, staging areas may play a key role in the marketing package for trail use and cycling tourism. If properly implemented and promoted, it may help to alleviate pressures on road sides in the rural areas.

Once the master plan has been implemented, the inter-departmental working group and Trails and AT advisory committee should make the implementation of network amenities a priority.

As a first step, the advisory committee or the Trails and AT coordinator should undertake an inventory of staging areas and network amenities and come up with a set of strategic priorities for future staging area.

Should the Town select to move forward with the selection of future staging areas, a standardized approach should be used. A four level hierarchy has been developed for the Town's reference. **Figure 6.2** illustrates the hierarchy and **Table 6.4** provides additional details regarding the amenities which could be included in each of the designs.



IMPLEMENTATION



Level 1



Level 2



Level 3



Level 4



Limited Amenities

Fully Serviced

**Intensity of design treatment would be determined based on area and surrounding characteristics as assessed Town staff using Table 6.3 as a guide*

Figure 6.2 – Staging Area Hierarchy
Source: MMM Group

Table 6.4 – Program Elements in the Staging Area Hierarchy

Staging Area Amenities	Level 1		Level 2		Level 3		Level 4		Additional Considerations
	Y	N	Y	N	Y	N	Y	N	
Parking	✓		✓		✓		✓		
Rest Area		✓	✓		✓		✓		
Lighting		✓		✓	✓		✓		
Signage	✓		✓		✓		✓		
Drop Off Area		✓		✓		✓	✓		
Garbage	✓		✓		✓		✓		
Washrooms		✓	✓		✓		✓		Portable seasonal washrooms for Level 3, in place from May to October
Gates / Barriers		✓		✓	✓		✓		
Loading Zones		✓		✓		✓	✓		
Shelter		✓		✓		✓	✓		
Potable Water		✓	✓			✓	✓		
Shade	✓		✓		✓		✓		
Green Infrastructure	✓		✓		✓		✓		

Recommendation 6.19:

The inter-departmental working group and the trails and active transportation advisory committee should review the hierarchy of staging areas and should refine it as necessary and adopt it as they move forward with the design and implementation of staging areas Town-wide.



IMPLEMENTATION



6.3 The Investment

The business case for investing in Trails and AT has been established in previous master plan chapters / appendices. The benefits not only justify why the Town should continue to make trails and active transportation / recreation a priority but it is a means of continuously increasing the quality of life of residents while increasing the longevity of municipal infrastructure and enhancing local tourism.

Costs associated with implementation, maintenance and promotion of network infrastructure can be justified by developing a connected, continuous and sustainable system of recreational and utilitarian transportation opportunities and the benefits which can be realized at an individual and community-level.

6.3.1 How was the Costing Developed?

The network costing has been developed based on a set of unit costs derived from recent design and construction projects across Ontario. **Appendix F** lists the unit costs for the construction of various elements of the cycling network. For reference purposes, **Appendix F** also includes guideline unit costs for network amenities that may be considered on a project by project specific basis. Unit costs (in 2013 dollars) are based on the following assumptions:

- The unit costs assume typical or normal / average conditions for construction;
- Estimates do not include the cost of property acquisition, utility relocation, driveway / entrance restorations, permits or approvals for construction;
- Annual inflation, which includes increased cost of labour, materials, fuel, etc., is not included;
- Professional services and / or staff time for detailed design have not been included; and
- Applicable taxes are not included.

6.3.2 What is the Investment?

Based on the assumption in section 6.3.1 and the costs outlined in Appendix F a three phased 20+ year cost estimate has been established associated with full build-out of the network. The phasing has been broken into five year timelines consistent with the implementation schedule.



IMPLEMENTATION



Table 6.5 - Estimated Implementation and Promotion / Marketing Strategy Cost Summary

Facility	Short Term (0-5 Years)		Medium Term (6-10 Years)		Long Term (11-20+ Years)		Total Distance (km)	Total Estimated Cost
	Total kms	Estimated Cost	Total kms	Estimated Cost	Total kms	Estimated Cost		
Multi-Use Trail	9.8	\$2,370,500	25.8	\$5,827,295	7	\$1,738,250	42.6	\$9,936,045
Bike Lane	1	\$7,477.5	0	0	0	0	1	\$7,477.5
Paved Shoulder	7.5	\$411,950	8.9	\$488,400	29.3	\$1,613,150	45.7	\$2,513,500
Signed-only Bike Route	101.6	\$152,365.5	84.4	\$126,525	18.7	\$28,113	204.7	\$307,003.5
Signed Bike Route with Edgeline	3.7	\$14,600	1.6	\$6,200	0	0	5.2	\$20,800
Signed Bike Route with Sharrow	7	\$24,500	0.2	\$759.50	0	0	7.2	\$25,259.5
Off-Road Connection between Shoreline Place and Metropolitan Crescent ¹	-	\$207,100	-	-	-	-	-	\$207,100
Maskinonge River Pedestrian Bridge Crossing ²	-	\$1,209,775.40	-	-	-	-	-	\$1,209,775.4
Network Total	130.6	\$4,398,268.4	120.8	\$6,449,179.5	55	\$3,379,513	306.4	\$14,226,960.91
Promotion / Marketing Strategy		Estimated Cost		Estimated Cost		Estimated Cost		Total Estimated Cost
Developing a Trails & AT Map ³ (Update every 5 Years)		\$35,000		\$25,000		\$25,000		\$85,000
Develop Mobile Bike Valet for Events		\$10,000		\$10,000		\$10,000		\$30,000
Develop Safety Campaign		\$20,000		\$10,000		\$10,000		\$40,000
Prepare & Implement a Set of Performance Measures		\$25,000		\$25,000		\$2,500		\$52,500
Program Total		\$67,500		\$70,000		\$70,000		\$207,500
Total Implementation Cost (Network Total + Program Total)		Total Short Term	Total Medium Term		Total Long Term			Total 20 Year Investment
		\$4,465,768.40						\$14,434,460.9

1. Off-Road Connection between Shoreline Place and Metropolitan Crescent identified in the Lake to Lake Cycling Route and Walking Trail Feasibility and Design Study Volume Report (June 2013).
2. Maskinonge River Pedestrian Bridge Crossing cost identified in Appendix III from Report No. OED-2013-0023 Environmental Assessment for the Maskinonge River Pedestrian Bridge.
3. Alternatively, the Town could request the Region's map be updated to include Georgina's routes.



IMPLEMENTATION



Costs associated with full build out of the network have been further organized based on facility types proposed. The spreadsheet can be found in **Appendix G**. The estimated cost to implement the 20 + year plan is \$14,226,960.90 of which \$11,501,430.90 falls under the jurisdiction of the Town of Georgina. When proceeding with implementation the Town should note that the costing associated with Phases 2 and 3 should be revisited through a five year review of this master plan.

The budget associated with these linkages / routes will depend on achieving economies of scale through future capital plans as well as municipal priorities as identified by Council and staff. **Table 6.5** is an overview of the short, medium and long-term costs for the network and also includes proposed costing for promotion / marketing initiatives associated with the cycling master plan.

The estimated costs reported in **Table 6.5** do not include potential savings / reductions that may be realized through:

- Infrastructure funding programs such as future federal and provincial infrastructure programming;
- Routes that are developed with funding or partial funding available through various subsidies and grant programs;
- Partnerships with outside organizations and agencies;
- Partnerships with York Region and associated groups e.g. York Tourism and York Region Public Health;
- Routes developed by others that could be used for cycling facilities (e.g. service access, roads along utility corridors, etc.);
- Facilities designed and constructed by developers and / or through the use of Development Charge funds;
- Routes that are built by developers through the land development approvals process; and
- On and off-road facilities that will be included as part of future scheduled roadway capital improvement projects at the Town and Regional level.

As each network segment becomes a priority for construction, a more detailed design assessment will be required. This assessment will help to determine site-specific conditions and design specifications. Cost estimates can then be developed based on this assessment to inform the Town's budget for the development of trail and AT infrastructure.



IMPLEMENTATION



Recommendation 6.20:

To implement the short-term priorities (projects identified in the first 0 – 5 years), the Town of Georgina should budget a total of \$4,465,768.40 (see Table 6.5) over the first 5 years. This translates to \$893,153.68 per year or \$13.45 / person / year assuming a municipal population of 43,517 (Statistics Canada 2011 Census data).

6.3.3 How could it be Funded?

To assist in reducing taxpayer costs, it is recommended that the Town pursue external funding opportunities. Recently, funding sources which support the development of AT or trail infrastructure or initiatives have been made available. There is an awareness of the increasing popularity of active forms of transportation and the relationship it plays in developing a connected, continuous and sustainable network. It is expected that this trend will continue.

Based on this understanding, the Town should explore the external funding source options as a means of gathering additional financial support and commitment for network implementation.

Funding opportunities could include:

- Federal / Provincial Gas Tax Fund (GTF). The GTF supports municipal infrastructure that contributes to cleaner air/water and reduced greenhouse gas emissions;
- Transport Canada's MOST (Moving of Sustainable Transportation) and Eco Mobility (TDM) grant programs;
- Federation of Canadian Municipalities Green Municipal Fund;
- Ontario Ministry of Health grant programs and partnership streams such as the Healthy Communities Fund and promotional initiatives related to health / active living / active transportation;
- Ontario Ministry of Environment Community GO Green Fund (CGGF);
- Ontario Ministry of Transportation Demand Management Municipal Grant Program;
- Various Federal and Provincial Infrastructure / stimulus programs that are offered;
- The Ontario Trillium Foundation that was recently expanded in response to the money collected throughout the Province by casinos;



IMPLEMENTATION



- Human Resources Development Canada program that enables personnel positions to be made available to various groups and organizations;
- Corporate Environmental Funds such as Shell and Mountain Equipment Co-op that tend to fund small, labour intensive projects where materials or logistical support is required;
- Corporate donations which may consist of money or services in-kind, and have been contributed by a number of large and small corporations over the years;
- Potential future funding that might emerge from the Province in rolling out the Ontario Trails Strategy as well as the recently released Ontario Cycling Strategy;
- Service clubs such as the Lions, Rotary, and Optimists who often assist with high visibility projects at the community level; and
- Private citizens donations / bequeaths - this can also include tax receipt(s) for the donor where appropriate.
- York Region's Pedestrian and Cycling Municipal Partnership Program.

Recommendation 6.21:

In addition to capital funding, the Town should consider and explore other outside funding sources and cost-sharing opportunities for the implementation of the trails and active transportation network, outreach and promotion programs.

6.3.4 Who might the Partners be?

The implementation of the master plan will require coordination between staff with input from local stakeholders, interest groups, public agency representatives and members of the public. Simply stated, it will be successful partnerships that will help to facilitate the development and implementation of the network and master plan recommendations.

Potential partners who could be involved in the implementation of the plan have been identified and proposed to form part of the Trails and AT Advisory Committee. These groups will meet or be consulted on an on-going (annual or quarterly) basis to provide input on the selection of future initiatives, projects and strategies.



IMPLEMENTATION



It is also important to note that there will be different partners consulted / engaged based on the project that is being implemented. The following framework is intended to help rationalize these partners. Some groups may be directly involved through membership in the Trails and AT Advisory Committee whereas others may be engaged on a project by project basis. The framework is intended to be used to assess which community partners should be involved to provide input on a project by project basis.

Table 6.6 – Hierarchy of Community Partners

Type	Primary Partners	Secondary Partners
Description	Would review and provide input into projects that impact lands under their jurisdiction.	Would be engaged primarily when soft infrastructure initiatives are being addressed and some partners may wish to be informed and provide input on hard infrastructure projects at the concept development level.
Partners	<ul style="list-style-type: none">• York Region• Lake Simcoe Region Conservation Authority• Province of Ontario• School Boards• Surrounding Municipalities	<ul style="list-style-type: none">• York Region Police Services• York Region Public Health & Tourism• York Cycling & Trails Committee• Local Businesses• Interest Groups• Committee and clubs at the local level• Public Representatives• Metrolinx• Ministry of Transportation• Ministry of Tourism, Culture & Sport



IMPLEMENTATION



6.4 Measuring Success

Master Plan implementation is intended to commence in 2014/2015. It is recommended that the Town implement the Plan in accordance with the proposed phasing plan / strategy. This would also take into consideration the capital and promotional funding made available by Town Council as well as Regional Council (where applicable) through budget review as well as additional external funding and partnership opportunities as they arise.

Collecting data to evaluate the different and changing aspects of user behaviour will assist in evaluating the effectiveness and overall contribution of various activities to achieve the vision, goals and objectives of this plan. Over time, performance monitoring should examine user preference for facilities, levels of use and other key factors. This data will inform staff when making adjustments to infrastructure prioritization and programming and to adjust them to meet local needs.

Results from on-going data collection may be used to determine the success of implementing various types of facilities. However, caution must be used when relying on an immediate response to a given improvement.

An extended timeframe should be established to ensure that awareness and communication initiatives are in place to assist in changing travel patterns and habits. This information should be collected every two to three years (maximum every 5 years) and at the same time / season each time.

Data collection through evaluation / monitoring programs and on-going public consultation (e.g. user surveys and public attitudes surveys conducted every 5-years), will inform and assist in preparing a list of annual priorities while measuring the success of the plan. A component of measuring implementation successes and objectives is to establish a set of performance measures and targets.

Appendix H has been prepared as a set of preliminary performance measures which could be reviewed and confirmed based on input from the Trails and AT Advisory Committee with possible input from the Region. The measures will ultimately be confirmed by the implementation leads from the Operations and Engineering and Recreation and Culture departments.



IMPLEMENTATION



In addition to staff time, the collection and analysis of data, development of relevant recommendations and adjustments to performance targets could be part of a scope of work for seasonal staff and / or students from post-secondary institutions who are studying community design, public health, transportation planning or engineering. Results of any such work should be reported to Council as part of an annual information report so they can remain informed about the process being made on the Master Plan, challenges or barriers which need to be mitigated or proposed budgets for the coming year.

Recommendation 6.22:

As part of creating a performance monitoring plan for the Master Plan, the Town should review the preliminary performance measures described in Appendix H. These should be used to confirm a Town-wide set of measures to evaluate the success of the Plan, and to monitor trends in usage.

6.5 Conclusion

The Trails and Active Transportation Master Plan has been developed to support a strategic long-term plan to increase levels of active transportation and trail use for recreation as well as utilitarian purposes to help increase community safety, encourage healthy lifestyles and improve the town's already existing tourism attractions.

The Town of Georgina and its partners, including but not limited to the Regional Municipality of York, Lake Simcoe Region Conservation Authority and Ontario Parks are encouraged to use this document as a guide for the development and implementation of the network in the short, medium and long-term.

The recommendations outlined have been designed to provide direction on how to initiate the Trail and AT network, as well as commerce, marketing and promotion in a realistic and achievable manner.

The study team would like to thank members of the public, local stakeholders and representatives from local agencies who gave their time and input in the development of the Trails and AT Master Plan, especially those who participated in the public open houses, completed the online survey and the many others who provided their written or verbal input to the study team.

Appendix A

Summary of Benefits



A SUMMARY OF BENEFITS

A.1 What are the benefits of Active Transportation & Trails in the Town of Georgina?

Promoting walking and cycling through the development of an integrated trail and active transportation (AT) network can provide positive health, environmental and economic impacts for the Town of Georgina. Providing options that will encourage people to reduce the use of personal automobiles, and to walk and cycle more may lower health care costs and help to create more sustainable and liveable communities.

Over the last ten years, the concepts of active forms of transportation and recreation have been gaining popularity due to the health, environmental, and economic benefits. In accordance with the Ministry of Health and Long Term Care's mission, the Town of Georgina's Active Transportation and Trails Master Plan will help make healthier choices easier for Town residents and visitors.



A.1.1 Active Lifestyles-Healthy Citizens

Sedentary lifestyles have serious health consequences including obesity which increases the risks of diabetes and cardio-vascular diseases. In the last 20 years, the prevalence of obesity in Canada has more than doubled (Katzmarzyk & Mason, 2006). Almost half of Canadians over the age of 12 report being physically inactive and 26% of youth between the ages of 2 and 17 are considered overweight or obese (Statistics Canada 2005).

Walking and cycling are both popular recreational activities and a means of transportation that are efficient, affordable, and accessible and promote healthy lifestyles. Increasing frequency of walking and cycling and reducing reliance on cars can lower the risk of obesity, lower the risk of hospitalizations from asthma and address other health conditions such as heart disease and type 2 diabetes caused by inactivity.

“Walking and cycling provide an enjoyable, convenient and affordable means of exercise and recreation. Research suggests that the most effective fitness routines are moderate in intensity, individualized and incorporated into our daily activities. In addition, studies have shown that people who use active transportation are, on average, more physically fit, less obese and have a reduced risk of cardiovascular disease.”

(Reynolds et al. “Active Transportation in Urban Areas: Exploring Health Benefits and Risks”, National Collaborating Centre for Environmental Health, June 2010)

The following are some specific examples:

- The ability to walk or cycle safely in neighbourhoods is integral to being physically active, maintaining a healthy body weight and increasing social interaction (Heart and Stroke Foundation of Canada, 2006);
- Trails are considered to be the safest and most preferred location to walk, cycle and use other non-motorized forms of transportation (Go for Green, National Active Transportation Survey, 2005);
- Exercise and health are seen by Canadians as the main benefit to walking and cycling. Practicality, convenience and pleasure are also frequently cited benefits (Go For Green, National Active Transportation Survey, 2005);
- A 5% increase in the walkability within a residential neighbourhood was associated with an increase of 32 minutes of physically active travel per day (Frank, 2006a);
- Individuals who have access to trails increase their recreational activity on average by 44% (Irish Trail Strategy, 2006);
- Policy changes at the local level have the potential to encourage increased physical activity over the long term by making active transportation an easier choice for residents (World Health Organization, 2006);
- One study has estimated that 40% of chronic illness could be prevented by regular physical activity and suggested that urban planning could offer opportunities for increased physical



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activity by creating walking and cycling alternatives, such as trails, to motorized transportation (Heart & Stroke Foundation of Nova Scotia, 2004);

- In 2001, approximately \$2.8 billion was spent on health care due to physical inactivity in Canada, which could be reduced by \$280 million if physical activity was increased by 10% (Business Case for AT, Go for Green, 2004);
- Canada's 2005 Physical Activity Monitor found that the top three preferred physical activities among Canadian youth are walking (66%), jogging or running (56%), bicycling (49%) (CFLRI 2005); and
- Mixed land uses, well-connected streets, trail and sidewalk networks that promote a supportive walking and cycling environment can help to increase resident's health by affecting their travel behaviour to include more active transportation modes (Frank, Kaveage & Litman, 2006).

The World Health Organization (WHO) reported that by changing personal travel habits away from private motorized vehicles to walking, cycling and public transit an individual would be able to experience the following personal health benefits:

- Reduced cardiovascular and respiratory disease from air pollution;
- Reduced traffic related injuries
- Reduced noise and noise-related stress; and
- Reduced chronic diseases such as type 2 diabetes, heart disease and cancers.

A.1.2 Creating Safer Communities

With regard to cycling and pedestrian safety, a report completed by Bueler & Pucher (2011) states that "Cycling safety is an important determinant of cycling levels. The causation probably goes in both directions. Several studies confirm that increased cycling safety encourages more people to cycle. Conversely, the concept of 'safety in numbers' proposes that, as more people cycle, it becomes safer because more cyclists are more visible to motorists and an increasing number of motorists are also cyclists, which probably makes them more considerate of cyclists when driving"¹.

"Cycling safety is an important determinant of cycling levels. The causation probably goes in both directions. Several studies confirm that increased cycling safety encourages more people to cycle."

(Buehler, R. and Pucher, J. "Cycling to Work in 90 Large American Cities: New Evidence on the Role of Bike Paths and Lanes". Sprinter Science+Business Media, LLC. (2011))

¹ Buehler, R. and Pucher, J. "Cycling to Work in 90 Large American Cities: New Evidence on the Role of Bike Paths and Lanes". Sprinter Science+Business Media, LLC. (2011)



A research paper developed by the Toronto Coalition for Active Transportation / Clean Air Partnership in 2010 defines the two principal safety concerns for pedestrians and cyclists as concerns related to personal safety that could be jeopardized by crime as well as concerns which arise as a result of traffic safety, due to the fact that non-motorized and motorized modes typically share the same infrastructure². Research has found that in the United States, pedestrians and cyclists suffer 2-3 times more accidents than a car driver (per 100 million trips) (Pucher and Dijkstra, 2003)³.

In another study completed by the Thunderhead Alliance, collision data was compared to the presence of bicycle and pedestrian fatalities and active transportation mode share. Results indicated a positive correlation between the levels of cycling and walking and increased safety of users. Cities with the highest raw numbers of walking and cycling also had the lowest per capita fatality rates for pedestrians and cyclists⁴. Substandard infrastructure can also increase the safety concerns of pedestrians and cyclists. Inadequate hard infrastructure sidewalks and bicycle paths, dangerous intersections and crosswalks and poor lighting were found to be significant contributors to increased fatality and injury rates among pedestrians and cyclists⁵. Another study completed in 2001 noted the following factors which tend to impact the safety of pedestrians⁶:

- The law requires all cyclists under age 18 to wear an approved bicycle helmet. Cyclists of all ages are recommended to wear a helmet. A properly fitted, certified helmet can reduce the risk of serious head and brain injury by 85 percent;
- Presence of a sidewalk;
- Lateral separation from motor vehicle traffic;
- Barriers and buffers between pedestrians and motor vehicle traffic;
- Motor vehicle volume and composition;
- Effects of motor vehicle traffic speed; and
- Driveway frequency and access volume.

Public opinion research indicates that with the development and / or enhancement of hard infrastructure, such as the implementation of separated bike lanes, bike boxes and cycle tracks, application of the complete street design principles and improved signage along designated cycle

² Behan, K & Smith Lea, N. "Benchmarking Active Transportation in Canadian Cities". Toronto Community Foundation. Clean Air Partnership (2010).

³ Pucher, J. and Dijkstra, L. "Making Walking and Cycling Safer: Lessons from Europe". Transportation Quarterly 54 (2000): 25-50.

⁴ Thunderhead Alliance. "Bicycling and Walking in the US; Benchmarking Report, 2007". Prescott, AZ: Thunderhead Alliance. 2007.

⁵ Zeeger, C.V. "Designing for Pedestrians". In the Traffic Safety Toolbox: A primer of Traffic Safety. Washington D.C.: Institute for Transportation Engineers. (1993)

⁶ Buehler, R. and Pucher, J. "Cycling to Work in 90 Large American Cities: New Evidence on the Role of Bike Paths and Lanes". Sprinter Science+Business Media, LLC. (2011)



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routes, many pedestrians and cyclists report that they feel safer and thus participate more frequently in active transportation activities. It is also important to complement the hard infrastructure with soft infrastructure such as education and awareness campaigns and pedestrian and cycling safety initiatives. Examples of these include:

- Canby (2003) recommends the creation of a strong education and advocacy program. European cities have experienced widespread change in pedestrian and cyclist safety with the implementation of traffic safety education program for children at an early age continued through into their teens.
- Zuks (2002) notes that programming related to bicycle handling, road sense, route selection and road rules should be developed to enhance the user's perception of safety while increasing physical safety on and off the roadways.

A.1.3 Making Georgina More Green

Canadians view environmental quality as an important factor that influences their personal health. The transportation sector is a major source of air pollution in Canada. Transport Canada (2006) identified that urban passenger travel created almost half of the greenhouse gas emission of Canada's transportation sector, which in turn produces about one quarter of Canada's total greenhouse gas emissions.

Providing infrastructure that supports alternative modes of transportation, such as an integrated trail and active transportation network for walking and cycling, can reduce vehicle traffic volumes; roadways can carry 7 to 12 times as many people per lane per hour by bicycle compared to that of motor vehicles in urban areas. Reducing the amount of vehicle travel will reduce pollution emissions. Some specific examples include:

“Walking and cycling are both popular recreational activities and a means of transportation that are efficient, affordable and accessible. They are the most energy efficient modes of transportation that generate no pollution. The transportation benefits of walking, cycling and other active transportation modes include reduced road congestion and maintenance costs, less costly infrastructure, increased road safety and decreased user costs.”

(Reynolds et al. “Active Transportation in Urban Areas: Exploring Health Benefits and Risks”, National Collaborating Centre for Environmental Health. June 2010)

- Walking and cycling curb greenhouse gas emissions and global climate change and save valuable green space (National Active Transportation Roundtable, 2003);
- WHO report estimates that if aggressive land use policies were implemented 40 to 50 percent of Canada's urban emissions of greenhouse gases could be avoided;
- The ecological footprint is a measure of human demands on natural resources such as land, water and air, and is reduced when people choose to travel by walking and cycling. “The greatest contributing factor to a large ecological footprint is carbon intensive fuel supplies for



transportation, electricity and heating” (Ontario College of Family Physicians, 2005, p. 20). Cycling and walking have negligible effects on the size of the ecological footprint;

- The average GHG intensity for light duty vehicles was 295 grams CO₂ per km in 2005. Promoting trail use, especially walking and cycling, can produce significant greenhouse gas emission reductions, approximately 1KT of CO₂ for each 3,500 km of trail use;
- Compact communities with mixed land use serviced by trails will increase active transportation choices, decrease the need to drive to daily destinations and will decrease the vehicle emissions that contribute to air pollution (CMHC, 2006);
- On-road trails, as a means of connecting off-road trails, can reduce road congestion and maintenance costs. These connections also allow for an increase in trails use for recreational as well as utilitarian purposes;
- On-road trails may contribute to increased safety for pedestrians by providing a paved shoulder for cyclists. Paved shoulders also prove to be more cost effective as opposed to adding new auto lanes;
- Cycling and walking cause little or no congestion and result in no greenhouse gas emissions. Walking and cycling opportunities on trails are considered environmentally positive; and
- There is strong evidence that given complete networks of high-quality cycling routes, a significant number of people will cycle, as demonstrated in Davis, California and Boulder, Colorado. With 20% of trips by bicycle, these communities have the highest levels of bicycle usage in North America. This high level of cycling is facilitated by mature networks, which include bike lanes on almost all arterial roads and extensive off-road commuter bicycle paths. Residents can simply get on their bicycles with confidence knowing there will always be a safe route to their destination (British Columbia Cycling Coalition Budget Submission, 2007).

A.1.4 Enhancing Economic Development and Tourism

As outlined in the Go for Green March 2004 Report “The Economic Benefits of Walking and Cycling”, economic benefits of active transportation include but are not limited to:

- Reduction in road construction, repair and maintenance costs;
- Reduction in costs due to air pollutants and greenhouse gas emissions;
- Reduction in health care costs due to increased physical activity and reduced respiratory and cardiac

Trails and active transportation routes across North America have created numerous benefits and opportunities for the communities that they pass through. Communities benefit from the development of active forms of infrastructure through increases in business activity, and by providing services to an increasing number of trail users.



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disease;

- Reduction in fuel, repair and maintenance costs to users;
- Reduction of costs due to increased road safety;
- Reduction in external costs due to traffic congestion;
- Reduction in parking subsidies;
- Reduction of costs due to air pollution;
- Reduction of costs due to water pollution;
- The positive economic impact of bicycle tourism;
- The positive economic impact of bicycle sales and manufacturing;
- Increased property values along greenways and trails; and
- Increased productivity and reduction of sick days and injuries in the workplace.

Trails systems can have varied levels of attraction for tourists. They can be travel destinations in themselves, encouraging visitors to extend their stay in the area or enhancing business and pleasure visits. In order to identify tourism opportunities, and to recognize the types of businesses, services and amenities that users will demand, it is important to also acknowledge the preferences and characteristics of trail users. Gaining an understanding of these preferences and characteristics could assist in developing a tourism development strategy and plan that markets trail use in the Town of Georgina.

A 2004 comprehensive study completed by PriceWaterhouseCoopers investigated the economic benefits of developing trail systems as part of a study to project the economic benefits of developing the Trans Canada Trail. Some of the information collected regarding economic benefits to other jurisdictions includes the following:

- A study of the “T” Railway in Newfoundland (2002) found that the total annual economic impacts associated with this trail are estimated to be as high as \$17.4 million in new income generated, upwards of 850 new jobs and millions of dollars in additional taxation revenue for both the provincial and federal governments;
- A survey of users of the Georgian Trail in Collingwood, Ontario estimated that the direct expenditure associated with the trail users was \$5.2 million in 1999; and
- The Economic Impact Study for the Allegheny Trail Alliance (1999) found that trail business accounts for more than 10% of annual receipts for a third of business respondents in the region, and that approximately half of all businesses in the area have plans to expand their business as a result.



There is ample evidence that trails provide significant economic benefits for adjacent landowners and local businesses. Trails provide benefits to the local economy during both construction and operation. Trail construction results in direct benefits such as jobs, including the supply and installation of materials. Following construction, benefits emerge in the form of expenditures by trail users.

A few examples include:

- Trails in New Brunswick employ around 1500 people for an average of six months per year;
- 70% of users of the Bruce Trail cite the trail as the main reason for visiting the area. They spend an average of about \$20.00 per user per visit within a 10 km corridor on either side of the trail;
- The Riverwalk is considered the anchor of the tourism industry in San Antonio, Texas and contributes \$1.2 billion annually to the local economy;
- In 1988, users of the Elroy-Sparta Trail in Wisconsin averaged expenditures of USD \$25.14 per day for trip-related expenses for a total of over \$1.2 million annually;
- More than 600,000 Americans took a bicycle vacation in 1985, and when travelling in a group, spent \$17 per day camping or \$50 per day staying in motels. Cyclists travelling alone spent an average of \$22 per day camping or \$60 per day staying in motels;
- In Ontario, the Eastern Ontario Trails Alliance estimated that at the end of a 10 year build-out period, 320 km of their system, constructed at a cost of \$5.4 million will generate approximately \$36 million in annual economic benefits in the communities through which it passes, and create or sustain over 1100 jobs; and
- In Surrey B.C. a recent study compared the impact to single-family property values over 20 years for properties that bordered a greenway or trail versus properties that did not. The study found that introducing a greenway in four Surrey neighbourhoods increased property values bordering the trail by 1% to 10%, and did not result in any measurable increase in crime (City of Surrey, Greenway Proximity Study, 1980-2001).

Trail systems and facilities can have varied levels of attraction for tourists depending on the “level of tourist draw” the trails withhold. They can be travel destinations in themselves, encouraging visitors to extend their stay in the area or enhancing business and pleasure visits. By increasing the “level of tourist draw”, travellers can be expected to stay longer, resulting in an additional night’s lodging and meals, a major direct new benefit to local businesses.

A 1997 survey of Canadian tourists active in the outdoors showed that 30% of Ontario tourists cycled on at least one occasion while on vacation. The Ontario Ministry of Transportation reported that touring cyclists spend an average of \$130 per day in Ontario, and the bicycle retail



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and tourist industry contributes a minimum of \$150 million a year to the Ontario economy. Bed and breakfast operators between Ottawa and Kingston report that the majority of their business is from touring cyclists. Cyclists in Vermont spend an average of USD \$180 per day, the same amount expected of someone travelling by car.

A.1.5 Influencing a Greater Modal Shift

Walking and cycling are both popular recreational activities and a means of transportation that are efficient, affordable and accessible. These are the most energy efficient modes of transportation that do not directly generate pollution (with the exception of bicycle manufacturing). The transportation benefits of walking, cycling and other active transportation modes include reduced road congestion (i.e. move more people by AT along a road compared to moving the same number of people by car), reduced maintenance costs, less costly infrastructure, increased road safety and decreased user costs⁷.

“In general, cycling is nearly as fast as driving for trips of 7 kilometres or less in urban areas and walking is as fast as driving for trips of 500 metres or less. Studies estimate that the construction of sidewalks on all city streets could increase non-motorized travel 0.16 km and reduce automobile travel 1.84 vehicles-kilometres per capita.”

(Litman, T. “Evaluating Non-Motorized Transportation Benefits and Costs”. Victoria Transport Policy Institute. www.vtpi.org. 2005.)

In general, cycling is nearly as fast as driving for trips of 7 kilometres or less in urban areas and walking is as fast as driving for trips of 500 metres or less⁸. Studies estimate that the construction of sidewalks on all city streets could increase non-motorized travel 0.16 km and reduce automobile travel 1.84 vehicles-kilometres per capita⁹.

A 2012 report from the City of Toronto’s Public Health Division concluded that the implementation of active transportation has very important transportation benefits. Some of the key findings include:

- Reduced traffic and road congestion
- Reduced delays from collisions
- Reduced unreliability of travel time
- Reduced fuel and transport costs

⁷ Reynolds, M., Winters, M., Ries, F. & Gouge B. “Active Transportation in Urban Areas: Exploring Health Benefits and Risks”. National Collaborating Centre for Environmental Health. June 2010

⁸ Toronto Public Health. Road to Health: Improving Walking and Cycling in Toronto. 2012

⁹ Litman, T. “Evaluating Non-Motorized Transportation Benefits and Costs”. Victoria Transport Policy Institute. www.vtpi.org. 2005.



- Improved residents' ability to access facilities and services.

Congestion costs in Ontario were estimated at \$6.4 billion annually and could grow by an additional \$7 billion annually by 2021 without increased investment in alternative modes of transportation¹⁰. Studies have shown that walking and cycling improvements may reduce personal expenditures on taxi costs and public transit fares¹¹.

Reducing automobile ownership and usage may further contribute to lower parking costs and fewer parking spaces required at a place of employment. Some of the key findings to encourage active transportation include:

- Reduction in roadway costs (maintenance, safety and enhancement costs)
- Less damage to road surfaces.
- Lower space requirement than motor vehicles.

Surveys indicate that 66% of Canadians would cycle more than they presently do. Seven in ten Canadians say they would cycle to work if there "were a dedicated lane which would take me to my workplace in less than 30 minutes at a comfortable pace"¹².

¹⁰ Transportation Demand Management Strategy, City of Ottawa - TravelWise (Transportation, Utilities and Public Works), April 2003

¹¹ Litman, T. "Evaluating Non-Motorized Transportation Benefits and Costs". Victoria Transport Policy Institute. www.vtpi.org. 2005.

¹² Ontario Trails Strategy. Ministry of Health Promotion. 2005

Appendix B

Summary of Background Information



B BACKGROUND INFORMATION SUMMARY

A successful trail and active transportation (AT) master plan needs to be founded on policy at all levels of government. Guidance from these documents is integral to understanding the tools and mechanisms which need to be developed to implement the plan. The summary found in this appendix provides an existing policy framework for trails and active transportation at the federal, provincial, regional and Town level. This policy framework formed the basis for developing the Town of Georgina Trail and Active Transportation (AT) Master Plan Study.

B.1 Federal Policies & Plans

B.1.1 Transport Canada

In 2005, Transport Canada developed a report titled “**Strategies for Sustainable Transportation Planning: a review of practices and options**”. The report identifies a set of guidelines which document how sustainable transportation principles can be incorporated into municipal transportation plans.

A sample principle includes the creation of policies related to walking and cycling that can be used to develop effective, implementable plans which promote sustainable transportation at the



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federal level. Strategies and policies within the report which specifically address sustainable transportation include:

Table B.1 - Sustainable Transportation Policies & Strategies from Transport Canada

Federal Organizations	Provincial Organizations
Land Use Planning Integration	<ul style="list-style-type: none"> Encourage desirable land use form and design (e.g. compact, mixed-use, pedestrian/bike-friendly) through transportation plan policies.
Environment & Health	<ul style="list-style-type: none"> Identify strategies to mitigate the air quality impacts of transportation activities. Identify strategies to mitigate noise impacts of transportation activities. Identify ways that transportation systems influence the achievement of the community's economic or social objectives. Provide support in the plan's strategic directions. Recognize the importance of ensuring access to opportunities for disabled and low-income persons, recent immigrants, youth and the elderly. Set goals and objectives for reducing the need to travel, improving transit mobility, and preserving minimum levels of service on roadways. Identify related strategies. Address the transportation needs of persons with disabilities, notably with regard to public transit service and barrier-free design in public rights-of-way. Recognize the public health impacts of transportation activity arising through road safety, pollution and physical activity levels. Identify effective strategies to strengthen positive impacts and lessen negative ones. Recognize the impact of transportation-related death and injury on quality of life and the economy. Set goals and objectives for multimodal road safety. Identify effective road safety strategies.
Modal Sustainability	<ul style="list-style-type: none"> Identify strategies, policies, facilities and services to increase walking, cycling, other active transportation, transit, ridesharing and teleworking. Recognize synergies and tensions among different modes (e.g. potential for multimodal cycling-transit trips, potential for modal shift from transit to ridesharing). Address possible implications for transportation objectives. Include objectives, strategies, policies, facilities and services to make transit operations more sustainable.

The publishing of this document and the recommended policies and strategies identified within it illustrates the federal government's commitment to developing national standards and practices which can be used to help improve conditions for walking and cycling and a consistent and coordinated manner.



B.1.2 Federation of Canadian Municipalities

The Federation of Canadian Municipalities (FCM) has considered itself the national voice for municipal governments since 1901. The organization represents 1,775 municipal members which fall within the federal jurisdiction. Members include Canada's largest cities, small urban and rural communities, and 18 provincial and territorial municipal associations. The organization fosters the development of sustainable communities enjoying a high quality of life by promoting strong, effective and accountable municipal government.

FCM has recently developed the “**Communities in Motion: Bringing Active Transportation to Life Initiative**”. This document is a key resource for all Canadian municipalities. It sets out goals for promoting the development of active transportation infrastructure and programming, eliminating barriers to different travel mode choices and promoting active transportation modes such as walking and cycling as part of everyday life.

The document addresses the provision of on and off-road walking and cycling facilities specifically by noting that:

“Some pedestrians and cyclists stick to city streets to reduce travel time and distance. Others, however, prefer less stressful off-road routes that let them connect with nature. Lighting on trails improves safety and security, wayfinding systems help people get where they’re going, bike ramps let cyclists get up and down staircases with ease, and dedicated bridges help everyone cross waterways, ravines and railway lines. Off-road routes are also important for recreation, and many communities are expanding their trails systems to boost tourism.”

The promotion the design and development of walking and cycling facilities including both on and off-road alternatives is reinforced through this policy at a federal level. Local municipalities are encouraged to use these findings to help guide the development of individual routes, systems and linkages which highlight natural areas, promote community connectivity and help to realize economic benefits community-wide.

B.2 Provincial Policies & Plans

B.2.1 Provincial Policy Statement

The Provincial Policy Statement (PPS)ⁱ, currently under review, sets the foundation for regulating land use and development within the Province of Ontario while supporting provincial goals and objectives. The PPS sets out guidelines for sustainable development and the protection of resources of provincial interest. The vision for land use planning outlined in the PPS states that “long-term prosperity and social well-being of Ontarians depends on maintaining strong communities, a clean healthy environment and a strong economy”.



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The PPS promotes transportation choices that facilitate pedestrian and cycling mobility and other modes of travel. “Transportation systems” as defined in the PPS are systems that consist of corridors and rights-of-way used for the movement of people and goods as well as associated transportation facilities, including cycling lanes and park’n’ride lots. Policies pertaining to alternative modes of transportation such as cycling, walking and transit are dispersed throughout the PPS. The draft PPS update was released in September 2012 for public comment. Within this document references are made to the provision of active transportation (pedestrian and cycling) facilities as a means of encouraging the growth of the province and its local communities. Some of the references include:

- Supporting active transportation to increase connectivity within and among transportation modes to build strong, healthy communities (Page 5)
- As part of the Vision for Ontario’s Land Use Planning System, the province is committed to developing land patterns which promote and increased use of active transportation modes (Page 11). This concept is repeated frequently throughout the document as different land uses are discussed.
- In section 1.4, “Housing”, it is encouraged that new housing areas be developed to promote densities which support the use of active transportation (Page 18).
- Section 1.6, “Infrastructure”, notes that active transportation be included as part of public service facilities which are to be located within community hubs to promote cost-effectiveness (Page 19).
- Section 1.8, “Energy Conservation, Air Quality and Climate Change”, identifies the importance of the promotion of active transportation between residential, employment and other land uses to support energy conservation and efficiency.
- Section 1.5 speaks to “Public spaces, recreation, parks, trails and open space” which is based around the promotion and facilitation of active transportation development to ensure that communities are successfully connected for recreation as well as utilitarian purposes.
- Section 6.0 provides definitions for key terms used throughout the document. As identified by the Province of Ontario, Active Transportation means:

“Human-powered travel, including but not limited to, walking, cycling, inline skating and travel with the use of mobility aids, including motorized wheelchairs and other power-assisted devices moving at a comparable speed.”

It is important to note that this definition is reflected in other provincial and local planning documents and should here-on-in be used as the standard definition of active transportation for the Town of Georgina’s Trails and AT Master Plan Study.



B.2.2 Bill 51 – Plan Reform

Bill 51ⁱⁱ was approved in January of 2007 and reforms the Planning Act. The Planning Act provides the legislative framework and is the guiding document for land use planning in Ontario. The document outlines changes to the planning process that are intended to support intensification, sustainable development and the protection of green space. This is facilitated by increasing municipalities' power and flexibility and providing them with the tools to efficiently use land, resources and infrastructure.

Bill 51 is consistent with Ontario's recent policy shift towards sustainable land use development and planning. For instance, Bill 51 allows municipalities to require environmentally sustainable design for individual buildings as well as entire neighbourhoods. It has also identified sustainable development as a provincial goal and objective as part of the Provincial Policy Statement.

B.2.3 Municipal Act (2001)

The Municipal Act (2001)ⁱⁱⁱ gives municipalities flexibility when dealing with issues that may arise which influence municipal development. It also requires local municipalities to react quickly to local, economic, environmental or social changes. It recognizes that municipal governments are responsible and accountable when addressing matters within their jurisdictions. The Municipal Act sets out policies pertaining to municipal jurisdiction over municipal highways and the maintenance of those highways. This, in turn, has significant impact on the design and development of cycling facilities which are identified within the road right-of-way.

B.2.4 Highway Traffic Act

Bicycles are recognized as a vehicle, as defined in the Ontario Highway Traffic Act (HTA)^{iv}. As such, they can operate on public roadways with the same rights and responsibilities as a motor vehicle.

However, bicycles are not permitted on controlled access freeways such as the 400 series highways and / or any roadway designated for "no cycling" by a municipal bylaw. The Highway Traffic Act contains a number of policies relating to bicycles, including bicycle lanes on municipal roadways, vehicles interacting with bicycles, bicycles being overtaken, and regulating or prohibiting bicycles on highways.

The Ministry of Transportation is currently addressing many of the policies which pertain to cycling in the Highway Traffic Act. Though the policy document has not been formally updated, possible changes and recommended amendments have been proposed for consideration by the ministry. As the Act is updated, the Town must be aware of how the changes will impact the implementation of enforcement of safe cycling Town-wide.



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B.2.5 Ministry of Health Promotion

The former Ministry of Health Promotion was integrated into the Ministry of Health and Long-Term Care in 2011 and serves as one of the lead Ministries for trail development in Ontario. It is this ministry which has the responsibility of coordinating and mitigating recreational trail issues, policy development and planning at a provincial level. The Ministry of Health and Long-Term Care's mission is to:

- Champion health promotion in Ontario, and inspire individuals, organizations, communities and governments to create a culture of health and wellbeing.
- Provide programs, services, tools and incentives that will enhance health and wellbeing.
- Make healthy choices easier.
- Harness the energy and commitment of other ministries, other levels of government, community partners, the private sector, the media and the public to promote health and wellbeing for all Ontarians.
- To make Ontario a leader in health promotion within Canada and internationally.

A number of years ago, the Ministry of Health Promotion drafted a vision for Ontario's trails which states that the province should explore the development of:

“A world class system of trails that captures the uniqueness and beauty of Ontario's vast open spaces and natural and built cultural/heritage resources. People and places are connected through quality, diverse, safe, accessible and environmentally sensitive urban, rural and wilderness experience trails for recreational enjoyment, active living and tourism development.”

B.2.6 Accessibility for Ontarians with Disabilities Act (2005)

The Accessibility for Ontarians with Disabilities Act^v was passed on June 13, 2005 and is a provincially legislated policy which calls on the business community, public and not-for-profit sector and people with disabilities or their representatives to develop, implement and enforce mandatory standards.

The policy makes Ontario the first jurisdiction in Canada to develop, implement and enforce accessibility standards which are applied to both private and public sectors. These standards are the guidelines that businesses in Ontario are required to follow to identify, remove and prevent barriers to accessibility. The Built Environment is the most relevant standard that can be applied to trail planning, design and construction. The final draft of the standard was submitted to the Minister of Community and Social Services in 2010. Conservation Land staffs at the TRCA are incorporating the recommendations provided in the final draft as minimum standards for trail design.



B.2.7 AODA Amendment – Part IV.1 “Design of Public Spaces Standards Accessibility Standards for the Built Environment”^{vi}

“The goal of the Accessibility Standards for the Built Environment is to remove barriers in public spaces and buildings. This will make it easier for all Ontarians — including people with disabilities, seniors and families — to access the places where they work, travel, shop and play.”

The standard for public spaces currently only applies to new construction and planned redevelopment. Enhancements to accessibility for buildings will happen at a later date through Ontario’s Building Code, which governs new construction and renovations in buildings. The standards for public spaces cover: Recreational Trails and Beach Access Routes, Outdoor Public Use Eating Areas, Outdoor Play Spaces, Exterior Paths of Travel, Accessible Parking and Obtaining Services. Some highlights of the technical requirements for recreational trails under the new regulation 80.8(1) include:

- A recreational trail must have a minimum clear width of 1,000 mm;
- A recreational trail must have a clear height that provides a minimum head room clearance of 2,100 mm above the trail.
- The surface of the recreational trail must be firm and stable.
- The entrance to the recreational trail must provide a clear opening of between 850 mm and 1,000 mm, whether the entrance is a gate, bollard or other entrance design.
- A recreational trail must have at its start signage that provides the following information: the length of trail; the type of surface of which the trail is constructed; the average and the minimum trail width; the average running slope and maximum cross slope and the location of amenities, where provided.

The development of active transportation facilities (on and off-road walking and cycling) is not a one size fits all approach. Trail facilities are to be developed to accommodate all users including those with a variety of needs and levels of ability. The Technical Requirements for Recreational Trails in the AODA outlines criteria which are to be used for the development and design of trails which accommodate such user groups. When designing and implementing on and off-road cycling facilities for the Town of Georgina, the technical requirements should be utilized to ensure that the needs of all user groups are accommodated. They should also be used to ensure that the requirements of the AODA are satisfied to the greatest extent possible, given the context of each trail’s location, the surrounding environment and type of trail experience that is desired.

B.2.8 Ontario Trails Strategy

The Provincial government developed the Ontario Trails Strategy^{vii} in response to the increasing popularity of trail activities and infrastructure. With the growing demand for trail infrastructure



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came the need for government leadership, protection of provincial investment in trails and the mitigation of significant provincial trail issues or challenges. The Ontario Trails Strategy is a long-term plan that establishes a strategic direction for the province and stakeholders to develop a healthier and more prosperous province through the planning, management, promotion and use of trails. Developed in collaboration with other ministries and stakeholders, the strategy supports continued cooperation among governments and the not-for-profit and private sectors. There are five strategic directions that are outlined in the Ontario Trails Strategy:

- Improving collaboration among stakeholders;
- Enhancing the sustainability of Ontario's trails;
- Enhancing the trail experience;
- Educating Ontarians about trails; and
- Fostering better health and a strong economy through trails.

A number of goals and strategies have also been identified to support each of the five strategic directions. The Ontario Trails Strategy recommends that trail organizations develop common standards to guide the development and use of trails. This would help the trail system evolve to meet the particular needs of new users in a more consistent way. Trail organizations also need more effective tools and better ways of distributing information to Ontarians. As these challenges require coordination at all levels, the provincial government and the public, not-for-profit and private sectors will continue to collaborate on priorities, roles and responsibilities, timeframes, and methods to strengthen and enhance existing and future trails in Ontario. The strategic directions identified as part of the Trails Strategy will help to inform the development of key trail and active transportation recommendations for the Town of Georgina.

B.2.9 Ontario Public Health Standards

The Ontario Public Health Standards and Protocols are provincially set-out program and services which help to promote community and public health. There are a total of 36 boards of health within the Province of Ontario. Each is responsible for public health assessment and surveillance, promotion and policy development, disease and injury prevention and health protection. The protocols set-out in the standards were developed by the Ministry of Health and Long-Term Care which replaced the previous Mandatory Health Program and Service Guidelines. The content of the standards include suggested program and outreach initiatives related to chronic diseases and injuries program standards, family health program standards, infectious diseases program standards, environmental health program standards and emergency preparedness program standards. Though there is no specific reference to active transportation or recreation within these guidance documents the significant health benefits associated with developing sustainable transportation options is in line with the goals and objectives of the Ministry.



B.2.10 Transit Supportive Guidelines (2012)

In 1992, the Ontario Ministries of Transportation and Municipal Affairs and Housing published the Transit-Supportive Land Use Planning Guidelines^{viii}. The focus of the report was developed to provide guidance on the development of transit-friendly land use and urban design. More recently, the MTO undertook an update to the guidelines to reflect continued progress in the development of more compact, transit-supportive communities. The updated 2012 report documents the most current thinking on transit-supportive urban planning and design in addition to current best practices in transit planning and the delivery of custom-oriented transit service throughout the Province of Ontario. The documents builds upon the policies, plans and initiatives developed by the Ministry over the past 10 + years including the Growth Plan for the Greater Golden Horseshoe (2006) and the updated Provincial Policy Statement (2005).

The guidelines consist of over 50 guidelines and approximately 450 specific strategies to guide urban planners, transit planners, developers etc. in creating communities that support transit and transit ridership. The document also supports the development of pedestrian and cycling connections throughout urban and rural communities to help enhance transit infrastructure and usage. Specific guidelines and strategies are presented throughout the document which reference the application of a complete street approach when designing transportation facilities. The approach includes the provision of safe and accessible pedestrian and cycling connections to and from transit stops and stations. A key goal of the Town of Georgina's trails and cycling master plan is generating connected and continuous transportation system. Recommendations set out on the transit-supportive guidelines will help to inform the development of proposed network linkages and recommendations which facilitate connectivity to transit and other modes of transportation.

B.2.11 Places to Grow Act (2005) / Growth Plan for the Greater Golden Horseshoe

The Growth plan for the Greater Golden Horseshoe was adopted in June 2006 under the provisions of the proposed Places to Grow Act, 2005^{ix}. The act facilitates the implementation of the Province's vision for developing stronger communities and managing the growth within those communities. The Growth plan generally takes precedence over the PPS and municipal official plans. The Province requires municipalities to take into consideration the policies and directives of the Growth plan in their day to day planning activities. With respect to pedestrian and cycling, the Growth plan envisions that:

“...an integrated transportation network will allow people choices for easy travel both within and between urban centres throughout the region. Public transit will be fast, convenient and affordable. Automobiles, while still a significant means of transport, will be only one of a variety of effective and well-used choices for transportation. Walking and cycling will be practical elements of our urban transportation systems. a



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healthy natural environment with clean air, land and water will characterize the Greater Golden Horseshoe”.

The Growth plan provides broad-level policies that direct more sustainable growth and development in the Greater Golden Horseshoe. The plan also identifies specific targets for implementation among municipalities. Though the plan is high-level and does not specifically influence the development of the Town's trails and cycling network the overall objectives will be supported through the plan's recommendations and guidelines.

B.2.12 Metrolinx: The Big Move – Transforming Transportation in the Greater Toronto and Hamilton Area (2008)

The Big Move^x – Transforming Transportation in the Greater Toronto and Hamilton Area is a Regional Transportation Plan created by Metrolinx, (an agency of the Government of Ontario) in 2008. The plan addresses numerous transportation issues experienced throughout the GTHA and identifies a vision as well as a set of goals and objectives for the future of Regional transportation. These objectives include but are not limited to transportation choices, active and healthy lifestyles and safe and secure mobility. To achieve the plan's vision and objectives, Metrolinx has identified strategies, recommended and priority actions, and supporting policies.

The Big Move is based on Green Papers developed in 2007 that outlined transportation challenges and opportunities within the GTHA. The Green Papers focused on themes of sustainable transportation, mobility hubs, active transportation, transportation demand management, moving goods and delivering services, roads and highways, and transit.

The Regional Transportation Plan is a long-term strategic plan to develop an integrated, multi-modal, regional transportation system. The Plan fulfills the Province's commitment to implementing a regional transportation network and further supports the policies of the Growth Plan for the Greater Golden Horseshoe. By developing this plan, Metrolinx is committed to improving transportation conditions in the GTHA which will ultimately provide residents and visitors with a transportation system that improves the quality of life of communities, protects and sustains the environment, and a promotes a prosperous and competitive economy within the next 25 years.

B.2.13 The Greenbelt Act

The Greenbelt Act^{xi} is a piece of policy that is complementary to the Growth Plan for the Greater Golden Horseshoe. The document provides clear direction as to what areas should be protected from growth in Ontario. It builds upon the policy framework established in the Provincial Policy Statement, the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan. The vision for the greenbelt is to provide for a diverse range of economic and social activities associated with rural communities, agriculture, tourism, recreation and resource uses. The



culture, recreation and tourism goals which relate to cycling and pedestrian movement for Ontario include:

- Provision of a wide range of publicly accessible built and natural settings for recreation including facilities, parklands, open space areas, trails and water based shoreline uses that support hiking, angling and other recreational activities; and
- Enabling continued opportunities for sustainable tourism development.

B.2.14 Ontario Cycling Strategy

In September 2013 the Ministry of Transportation Ontario (MTO) published the Draft Cycling Strategy. The strategy acknowledges the importance of developing cycling facilities to help reduce GHG emissions, ease gridlock, enhance the economy, increase tourism and increase the quality of life of the residents of Ontario. The strategy was developed based on increasing demand from local municipalities for direction from the province on the design and development of cycling facilities. The document also addresses a number of recommendations found in the Coroner’s report published in 2012.

The province’s vision is to ultimately “develop a safe cycling network that connects the province, for collision rates and injuries to continue to drop, and for everyone from the occasional user to the daily commuter to feel safe when they get a bicycle in Ontario.” The strategy is intended as a guide to ensure that this vision is achieved.

The Cycling Strategy outlines a provincial plan include recommended cycling infrastructure, education and legislation changes and enhancements including a set of proposed changes to The Highway Traffic Act.

B.2.15 Ontario’s Public Health Strategic Plan – Make No Little Plans

Two of the strategic goals that relate to trails and active transportation within this plan include: reducing preventable diseases and injuries, and promoting healthy environments – both natural and built. The plan acknowledges the link between health and the built environment, and states that public health needs “to enhance our capacity to advocate effectively with our partners for healthier built communities.”

B.3 Federal & Provincial Organizations

Table B.2 - Summary of Federal and Provincial Organizations & Applicable Initiatives and Policies

Federal Organizations	Provincial Organizations
<ul style="list-style-type: none">• Trans Canada Trails Association: The	<ul style="list-style-type: none">• Ontario Trails Council: The Ontario Trails



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Table B.2 - Summary of Federal and Provincial Organizations & Applicable Initiatives and Policies

Federal Organizations	Provincial Organizations
<p>Trans Canada Trail Association is a not-for-profit, registered charity. Its mission is to promote and assist in the development and use of Trails in every province and territory. They also provide funding to local trail builders to support the development of trails. Today, more than 16,500 kilometres of trail have been developed. When completed, the Trail will stretch 22,000 kilometres from the Atlantic to the Pacific to the Arctic Oceans, linking 1,000 communities and all Canadians.</p>	<p>Council (OTC), a not-for-profit organization which promotes the development of trails in Ontario. The Trillium Trail Network (TTN) is an initiative of the OTC and represents an opportunity for trails to link together between regions and communities in Ontario. The TTN consists of OTC members who register their trail as part of the network. Trillium Trail Network (TTN) is designed to be a province-wide network of trails which works to:</p> <ul style="list-style-type: none"> ○ Make Ontario a more attractive place to live and visit; ○ Promote trail travel and tourism; ○ Increase the number of trails available for use; ○ Improve trail management as TTN trails will work to implement accepted trail standards; ○ Promote ecological conservation; ○ Provide access to local history and community culture; and ○ Promote accessibility and use to disabled persons. <ul style="list-style-type: none"> • Share the Road Coalition: With cycling a burgeoning mode of transportation across the globe, and communities looking to enhance the health and wellbeing of their citizens, Share the Road Coalition is developing partnerships with like-minded stakeholders across Ontario and has focused on developing partnerships geared to building a Bicycle Friendly Ontario. Share the Road Cycling Coalition is a provincial cycling advocacy organization



Table B.2 - Summary of Federal and Provincial Organizations & Applicable Initiatives and Policies

Federal Organizations	Provincial Organizations
	<p>created to unite cycling organizations from across Ontario. They work with and on behalf of municipalities to enhance their ability to make their communities more bicycle-friendly.</p> <p>Since its inception, the Coalition has focused on outreach work with a view to building partnerships with active transportation stakeholders such as: cycling advocates, local cycling clubs, organizations and municipal advisory groups, municipal leaders and officials, law enforcement, planners, provincial politicians and officials, public health professionals, and funders. By uniting Ontarians who share a common set of objectives Share the Road Coalition is committed to leveraging the resources of those who have those common interests, with the objective of making Ontario the most bicycle friendly jurisdiction in the world.</p>

B.4 York Region Policies & Plans

Table B.3 - Summary of York Region Policies and Plans

Policy Name	Policy Description
Vision 2051 ^{xii}	<p>In November 2011, the Regional Municipality of York drafted a Regional Vision up to 2051. Throughout the document, walking and cycling are mentioned in great detail and are clearly a strategic priority for the future of the Region as well as its local municipalities. As an update to Vision 2026, this draft document will now be the blueprint for future development Region-wide.</p> <p>The Region has placed a large focus on creating an intermodal transportation system (e.g. transit, cycling, walking, carpooling etc.) which further promotes</p>



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Table B.3 - Summary of York Region Policies and Plans

Policy Name	Policy Description
	<p>the development of healthy and sustainable communities. More specifically, the document clearly outlines the need for “prioritized alternative modes of travel for active transportation” including:</p> <ul style="list-style-type: none"> • Providing convenient and reliable alternative modes of travel and prioritizing walking, cycling, public transit and carpooling; • Implementing a comprehensive pedestrian system and programs that encourage walking, cycling and transit use; and • Facilitating an on and off-road cycling network that connects municipal cycling networks and trail systems, and creates a regional spine that will facilitate transportation by bicycle for utilitarian purposes and support the use of public transit.
Regional Municipality of York Official Plan^{xiii}	<p>York Region’s Official Plan was adopted by Regional Council in December 2009 and approved by the Ministry of Municipal Affairs and Housing in September 2010. The Region’s first Official Plan (1994) focused on the three key themes: sustainable natural environment, healthy communities and economic vitality. The focus of sustainability and the triple bottom line remains valid and has been further reinforced through the policies and recommendations outlined in the new Official Plan.</p> <p>The triple bottom line approach is proposed to be used to evaluate emerging trends and issues facing the Region. These trends and issues include:</p> <ul style="list-style-type: none"> • An aging and diverse society; • An urbanizing region defined by vibrant centres; • The impact of the built environment on social cohesion among and within communities; • Climate change, energy conservation and renewable sources of energy; • Societal health issues such as obesity, mental illnesses, and cardiovascular and respiratory diseases. <p>There is specific reference to the development of trail and active transportation facilities throughout the Official Plan document. The plan calls for higher standards for new communities, mobility systems that prioritize walking, cycling and transit use, linked and enhanced Regional Greenlands System and context-sensitive design for infrastructure projects which can all be achieved through the design, implementation and promotion of active</p>



Table B.3 - Summary of York Region Policies and Plans

Policy Name	Policy Description
	<p>modes of transportation and recreation. More specific active transportation and trail references found within the Official Plan include:</p> <ul style="list-style-type: none"> • 3.1(3) To require high-quality urban design and pedestrian-friendly communities that provide safety, comfort and mobility so that residents can walk to meet their daily needs. • 3.2(3) To reduce vehicle emissions by ensuring that communities are designed to prioritize pedestrians and cyclists, reduce single occupancy automobile use, and support public transit and transportation demand initiatives. • 5.2 (3) That communities be designed to ensure walkability through interconnected and accessible mobility systems. These systems will give priority to pedestrian movement and transit use, provide pedestrian and cycling facilities, and implement the York Region Pedestrian and Cycling Master Plan. • 5.2 (8a) to employ the highest standard of urban design, which: a. provides pedestrian scale, safety, comfort, accessibility and connectivity. • 5.6 (12b) communities are designed to include a system of pedestrian and bicycle paths linking the community internally and externally to other areas, and providing access to the transit system; (3) all schools and community centres shall be integrated into the community mobility system and provide the ability to walk, cycle, transit and carpool to these locations. • 7.2 (5) To provide safe, comfortable and accessible pedestrian and cycling facilities that meet the needs of York Region's residents and workers, including children, youth, seniors and people with disabilities. • 7.3 (14, 55) – 14: to develop and promote a continuous pedestrian and cycling path from Lake Simcoe to Lake Ontario in partnership with local municipalities and the City of Toronto; 55. To require local municipalities to design street systems to accommodate pedestrian, cycling and transit facilities. <p>More specifically, the Official Plan outlines a primary function and vision for the Regional Greenlands System. The system is to be implemented to facilitate the protection of natural heritage features in a system of communities connected by corridors and linkages. The Regional Greenlands System provides opportunities for passive recreation (e.g. such as hiking and nature</p>



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Table B.3 - Summary of York Region Policies and Plans

Policy Name	Policy Description
	<p>appreciation) using a future Region-Wide Trails System. Any future proposed urban land uses and infrastructure projects should contribute ecological gains to the Regional Greenlands System through enhancement and restoration, and the strategic creation of natural habitat.</p> <p>As such, the Official Plan provides high-level transportation related priorities which will be reflected in the Town's trails and active transportation master plan. In addition the proposed Regional Greenlands System will be referenced in detail when developing the proposed network including off-road trail linkages through municipal as well as Regional natural areas.</p>
York Region Pedestrian and Cycling Master Plan^{xiv}	<p>On April 24, 2008, York Region Council endorsed the Region's first Pedestrian and Cycling Master Plan (PCMP). The plan is intended to be a blueprint for the development of walking and cycling infrastructure. The PCMP is a guide for the Region as it works with local municipalities over the next 25 years and beyond to implement a comprehensive pedestrian system and an on- and off-road region-wide cycling system. The vision for the PCMP is based on the principle of assigning more priority to walking, cycling, public transit, carpooling, and transportation demand management initiatives.</p> <p>This will provide a more balanced and sustainable transportation system that places less emphasis on single occupant motor vehicle trips, thereby reducing traffic, and assists in reducing each individual's carbon footprint.</p> <p>The PCMP is a long term (25 year) strategy that includes a 10 and 25 year implementation plan with an implementation strategy that identifies route priorities and phasing. The plan consists of three phases: 0-5 years, 6-10 years, and 10+ years. The PCMP also includes a set of supporting policies and programs to promote walking and cycling at the Regional and local municipal level. The PCMP is positioned to be updated in 2012-2013. New features of the updated plan may include options for buffered bike lanes and cycle tracks.</p>
Regional Transportation Master Plan (TMP)	<p>The 2009 York Region Transportation Master Plan (TMP) Update is a strategic planning document designed to define a long-term transportation vision and integrated road and transit network plan. The plan will be used to support growth in York Region to the year 2031. The TMP integrates</p>



Table B.3 - Summary of York Region Policies and Plans

Policy Name	Policy Description
Update^{xv}	<p>transportation and land use planning and is guided by the goals, objectives and policies identified in the Region's Official Plan. The TMP provides a comprehensive Transportation Vision for the Regional Municipality of York, which is articulated in a set of desirable "end-states". These "end-states" address issues such as:</p> <ul style="list-style-type: none"> • Reduced amounts of travel on a per person basis; • Employer based Travel Demand Management (TDM) initiatives; • Reduced dependence on automobiles; • Universal access to public transit; • Integrated transit services and fares among GO, TTC and other GTA transit operators serving York Region; • Transit accessible human services; • Efficient and safe movement of goods, • Efficiently used infrastructure; infrastructure in a "state of good repair"; • Strong protection for the environment; • Adequate and dedicated long term funding sources; and • Effective public consultation. <p>The recommendations and network enhancements pertaining to trails and active transportation are a key reference when developing the Town's trails and AT network. It is important for the master plan documents to be consistent to ensure that there is no confusion about when, how and what to develop to ensure that the Region as well as local municipal vision is facilitated.</p> <p>The Regional Municipality of York is planning to initiate an update to the TMP report which is estimated to be completed within a 2 year timeline.</p>
York Region Sustainability Strategy^{xvi}	<p>York Region has prepared a Sustainability Strategy. The 2007 strategy is intended to provide a long-term framework for making smarter decisions about growth management and municipal responsibilities that better integrate the economy, environment and community. The strategy underscores the importance of recognizing how day to day choices can have lasting impacts on sustainability. The Sustainability Strategy is guided by the following principles:</p>



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Table B.3 - Summary of York Region Policies and Plans

Policy Name	Policy Description
	<ul style="list-style-type: none">• Provide a long-term perspective on sustainability;• Evaluate using the triple bottom-line elements of environment, economy and community;• Create a culture of continuous improvement: minimizing impact and maximizing innovation;• Identify specific short-term achievable actions that contribute to a sustainability legacy;• Set targets, monitor and report progress;• Foster partnerships and public engagement;• Raise the level of sustainability awareness through education, dialogue and reassessment; and• Promote sustainable lifestyles and re-evaluation of our consumption and expectations. <p>The Sustainability Strategy outlines a number of proposed actions to be undertaken by the Region. One of these actions is to promote the Region's Transit-Oriented Development Guidelines to provide opportunities which shape an urban form that is transit-supportive, mixed-use and efficient, and provides a sense of place to residents and employees. The Sustainability Strategy also outlines an action to prepare and adopt a York Region Pedestrian and Bicycling Master Plan, which will further support sustainable transportation. Since this time, the Pedestrian and Cycling Master Plan has been developed and adopted by Council within York Region.</p> <p>The guidelines established in the sustainability strategy as well as those referenced in the TMP and PCMP will be used as a key reference for the Town's trails and cycling master plan. In addition to the development of the proposed network, a set of design guidelines and considerations will be identified. The guidelines will reflect Regionally adopted guidelines and standards as well as newly development guidelines at the provincial level.</p>
The Greenland Trails System Concept Study^{xvii}	<p>The Greenlands Trails Study was prepared in response to requests by residents and Regional staff to enhance trails throughout the Region's nine local municipalities. Trail related policies found within the Pedestrian and Cycling Master Plan (2009), the Official Plan 2010 and the recommended actions of the Natural Heritage Strategic Directions Paper also supported the development of a Greenlands Trails System. The Region's Natural Heritage</p>

**Table B.3 - Summary of York Region Policies and Plans**

Policy Name	Policy Description
	<p>Discussion Paper established the vision for the Greenlands Trails System Concept Study, which is “to create a Greenlands Trails System that connects local municipal trail systems, and provides residents with the opportunity to experience the Greenlands System throughout York Region.”</p> <p>The Greenlands Trails System Concept Study recommends the development and implementation of a Greenlands Trails System be initiated as a complimentary component of the Region's award-winning Pedestrian and Cycling Master Plan (PCMP).</p> <p>The Greenlands System is comprised of cores, corridors, and linkages. These connections result in a system that facilitates the movement of animals, plant dispersion, and provides opportunities for pathways for walking and cycling, and ultimately, the creation of a Greenlands Trails System. Some of the key areas for the system's development can be found in the Town of Georgina. As such, the routes and principles identified in the concept study will help to inform the creation of the trails component of the trails and AT master plan study for the Town.</p>
York Region Lake to Lake Cycling Route and Walking Trail Study^{xviii}	<p>In 2011, the Regional Municipality of York undertook a feasibility study which explored the development of a cycling route and walking trail which would ultimately connect Lake Simcoe to the north and Lake Ontario to the south. The proposed touring route was originally identified and recommended as a priority project in the Pedestrian and Cycling Master Plan. The proposed route passes through most of the Regional municipalities and highlights existing trail facilities such as the Tom Taylor Trail.</p> <p>When developed, the trail will give municipalities, like the Town of Georgina, the opportunity to incorporate their own trail systems into the Lake-to-Lake network and build upon the proposed branding, signage and tourism.</p> <p>The trail system will begin from the city limits of the City of Toronto and extend through the City of Markham, City of Vaughan, Town of Richmond Hill, Township of King, Town of Aurora, Town of Whitchurch-Stouffville, Town of Newmarket, Town of East Gwillimbury and finally end in the Town of Georgina. The proposed route alignment and associated facility types will be used as a key spine route when developing the trails and AT network for Georgina.</p>
York Region Regional Trail Guide	<p>Originally released in 2002, the Take A Hike Trail Guide was created through the York Region Greening Strategy by a Trail Guide Planning Committee. The trail guide is now available online on the Region's website. The purpose of the</p>



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Table B.3 - Summary of York Region Policies and Plans

Policy Name	Policy Description
	guide is to encourage residents and visitors to discover the unique natural and cultural heritage of each community. It is also intended to be used to help promote healthy and active lifestyles by exploring the valley and stream corridors, kettle lakes, wetlands, woodlands, and wildlife habitats the Region has to offer through the extensive trail system outlined in the guide. The trail guide identifies the 32 recreational trails, including 18 Regional Forest tract routes found throughout the Region. The comprehensive guide is a key component of the York Region Greening Strategy's community education and promotion campaign and has been used to inform the development of the existing conditions mapping for the Town of Georgina.
Everyday Guide to York Regional Forest	The everyday guide to York Regional Forests is a promotional tool developed by the Region to help promote awareness and increased use of the Regional forest system in an environmentally sensitive manner. The brochure is available at key community destinations and provides a visual overview of trails found within Regional Forests. These off-road natural areas are considered key destinations for the trails and active transportation master plan.

B.5 Town of Georgina Policies & Plans

Table B.4 - Summary of Town of Georgina Policies and Plans

Policy Name	Policy Description
Town of Georgina Official Plan (Office Consolidation 2010)^{xix}	<p>In 2010, the Town of Georgina developed their most recent Official Plan to guide future municipal development up to the year 2021. The policy document is also intended as a guide for the management of Town land uses and future municipal growth. The plan was developed to ensure that the present and future residents of Georgina are given a healthy and sustainable community in which to reside.</p> <p>The Town used an 'ecosystem approach' to planning in an effort to achieve balance between the environmental, economic and social factors which influence the planning process.</p> <p>Through this plan, the Town of Georgina established a set of objectives pertaining to active recreation in land use, parkland use and urban residential design policies. The Town recognizes the need for a connected and diverse network of Active Transportation facilities Town-wide which also facilitates</p>

**Table B.4 - Summary of Town of Georgina Policies and Plans**

Policy Name	Policy Description
	<p>connectivity to surrounding communities. An overall increase in community connectivity will help to promote a better quality of life for Georgina's residents.</p> <p>In Section 5.2, transportation policies are established. A number of these policies pertain to the development and design of active transportation facilities. They are as follows:</p> <ul style="list-style-type: none">• 5.2.7.1: To develop a multi-use trail system that would connect the shoreline areas with other areas within the Georgina Greenlands System, where appropriate, and with linkages to other trails in the Region;• 5.2.7.2: Multi-use trail facilities will be encouraged both as a means of travel and for recreational uses; and• 5.2.7.5: Where new development is proposed, specific routes for trails shall be established as part of the development plan.
Town of Georgina Leisure Services Master Plan (2004)^{xx}	<p>Developed in 2004, the Leisure Services Master Plan establishes a policy framework which is used to guide the provision of parks, recreation, and leisure services in Georgina for both current and future populations. The goal of the Plan is to enhance the quality of life of all residents of all ages and abilities. The Master Plan provides direction for the next 10 years and includes a prioritized Implementation Plan that responds to the leisure needs of Georgina residents.</p> <p>The plan resulted in the identification of key issues pertaining to the Town's leisure services. One of the issues identified was the need for an expanded trail network Town-wide. Georgina's residents primarily walk and cycle for leisure and with the aging profile of the community, an increased amount of both paved and nature trails were an identified as an improvement which would facilitate continued levels of activity.</p> <p>A vision was developed to guide future decision making as it relates to leisure services. The vision is: "The Town of Georgina's Leisure Services Department shall provide parks, facilities and recreation programs to enrich the quality of life in Georgina. A strong focus will be placed on creative partnerships with the community and the protection, enhancement and appreciation of Lake Simcoe and all of the features of the natural environment". The vision sets out four guiding principles that provided the Town with a strategic direction future leisure services planning. The four principles include accessibility, infrastructure, partnerships and service delivery. The development of the trails and active transportation network and master plan for the Town of Georgina</p>



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Table B.4 - Summary of Town of Georgina Policies and Plans

Policy Name	Policy Description
	will reflect the principles and priorities identified in the Leisure Services Master Plan.
Town of Georgina Environmental Assessment for the Maskinonge River Pedestrian Bridge (2013)^{xxi}	The environmental assessment for the Maskinonge River pedestrian bridge was undertaken to build a community structure which helps to achieve municipal goals for pedestrian movement in the community of Keswick within the Town of Georgina. The opportunity for the development of a pedestrian bridge would provide residents with a key active transportation linkage to other trail networks, a safe crossing over the Maskinonge River and will provide improvements to the natural environment. The assessment discussed five different alternatives and “Alternative 3: Construct a New Pedestrian Bridge (Location #2)” was deemed the preferred solution. Once confirmed and implemented, this will form a key linkage and barrier crossing for the Georgina trails and active transportation network.
Town of Georgina Facilities & Amenities Map	Developed in 2011, the Facilities and Amenities Map for the Town of Georgina is a useful tool that residents can utilize when seeking information regarding recreation and leisure opportunities. This map outlines the facility, corresponding address and the facility’s amenities available for the residents use. This map is an effective means to display both locational and amenity specific information for each of the recreational facilities within the Town of Georgina. The maps forms an excellent basis for existing conditions which will be used to inform the development of base mapping for the Town’s Trails and Active Transportation Master Plan which will be included in a database of municipal information. Many of these facilities will form key destinations and in some cases access points for trail and active transportation infrastructure.
Town of Georgina - Sutton / Jackson’s Point Secondary Plan^{xxii}	As part of the Sutton / Jackson’s Point Secondary Plan adopted in June 2010, the Town of Georgina developed a “Trails Plan” (Schedule D of the report). The Trails Plan identified the development of an extension to the Lake Simcoe Trail as well as off-road cycling facilities and cycling facilities on Regional Roads building on the existing trails and facilities found within the Town. More specifically, within the secondary plan, trail related development is identified and supported through policy and proposed enhancements to the existing system including sidewalks and multi-use trails (both paved and natural). The proposed enhancements are meant to help create a “well-connected public trail system that promotes active transportation as well as active recreation touring, particularly in the form of walking, cycling, rollerblading and skiing in a manner that is sensitive to the environment and private land holdings” throughout the Town of Georgina.
Town of Georgina –	The Keswick Secondary Plan was updated in 2004 and developed in response to the need for active management to direct the growth of Keswick,



Table B.4 - Summary of Town of Georgina Policies and Plans

Policy Name	Policy Description
Keswick Secondary Plan (2004) ^{xxiii}	the largest urban community in the Town of Georgina. The primary purpose of the Secondary Plan is to manage and evolve the community into a well-balanced and attractive community that ensures a high quality of life for both present and future residents of Georgina. The plan identifies a range of housing opportunities, parkland and recreational space, access to goods and services, enhanced natural features and expanded employment opportunities. The plan was developed based on a goal to provide an efficient, healthy, attractive, safe, pedestrian-oriented, and accessible and barrier free community for the present and future residents of Keswick. The principles identified in the secondary plan will be considered not only for the component of the trails and active transportation network found in Keswick but should be used as guiding principles for the development of the network Town-wide.
Town of Georgina Socioeconomic Mission and Strategic Plan (2009) ^{xxiv}	In 2009, the Socioeconomic Mission and Strategic Plan was developed to guide the decisions of the Town to achieve economic prosperity and a better well-being for the community. This plan proactively works to take advantage of the opportunities of the future while addressing the challenges of today. The socioeconomic development mission statement for the Town was “to create an economy that is stable and diverse, respecting Georgina’s unique environment and values”. The Town’s community values highlighted in this report were best understood under 11 categories; one of which being ‘Accessible Places for Leisure and Recreation’. The community values and socioeconomic mission of the Town of Georgina will be considered when developing the trails and active transportation network.
Pefferlaw Secondary Plan – Amendment No. 70 to the Official Plan for the Town of Georgina (2000) ^{xxv}	The Pefferlaw Secondary Plan was developed to function as a reference document for the planning and co-ordination of development activities and undertakings within the Pefferlaw community area. This plan set out detailed land use policies and forms the basis for evaluation of development proposals. This plan recognized Pefferlaw as an important rural centre within the Town of Georgina and a significant provider of recreational opportunities to the local area. This plan outlines objectives pertaining to transportation that prioritize the development and maintenance of a rational, efficient and safe transportation system for vehicles, pedestrians and cyclists. Furthermore, this plan recognizes cycling as an alternative mode of transportation and its potential to improve mobility and quality of life as a component of a balanced transportation system.
Keswick Business Park Secondary Plan (2008) ^{xxvi}	The Keswick Business Park will function as the key northern employment centre for York Region. This Secondary Plan was developed to guide the development of the Keswick Business Park in an aesthetically pleasing and environmentally sensitive manner. A component within this plan outlines the

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Table B.4 - Summary of Town of Georgina Policies and Plans

Policy Name	Policy Description
	integration of the business park into the Greenlands System through the provision of connected pedestrian and cycling trails. The Keswick Business Park Secondary Plan will be considered in the development of the trails and active transportation network.

B.6 Surrounding Municipal Policies & Plans

As part of the development of the trails and active transportation master plan for the Town of Georgina it is also important to understand related initiatives which are being implemented in surrounding communities. One of the primary goals of the Town-wide network will be the creation of a continuous system of on and off-road trail and active transportation facilities which not only link key destinations and communities in the Town but also connect to surrounding municipalities.

As such, a summary of policies and plans from surrounding municipalities has also been undertaken to further understand possible inter-municipal connection as well as best practices for policies and recommendations as they related to trails and active transportation. A summary of applicable policies and plans has been prepared and presented in the table below.

Table B.5 - Summary of Surrounding Municipal Policies and Plans

Policy Name	Policy Description
Town of East Gwillimbury	<ul style="list-style-type: none">• Transportation Master Plan (May 2009)^{xxvii} was adopted to manage increasing growth through sustainable transportation policies and initiatives. The master plan was developed based on a commitment to the promotion and development of non-motorized transportation alternatives. The master plan identifies recommendations specific to pedestrian and cycling improvements including proposed facility types such as multi-use trails and off-road trails.• East Gwillimbury Natural Heritage System Study (2008)^{xxviii} – a review and summary of natural heritage (environmental) policies included with community plans was developed. The study report outlines an approach for natural heritage protection which is to be applied Town-wide. More specifically, the plan identified design criteria for the evaluation or natural heritage features which are used to assess future impacts.• Community Park, Recreation & Culture Strategic Master Plan (November 2009)^{xxix} – outlines the need and importance of developing trails and pathways Town-wide. The plan is intended to be used as a tool to determine the needs and priorities related to parks, recreation and cultural services and facilities. The document also outlines future actions for trail and facility development to address the increasing demand for active



Table B.5 - Summary of Surrounding Municipal Policies and Plans

Policy Name	Policy Description
	<p>transportation infrastructure.</p> <ul style="list-style-type: none"> • Active Transportation and Trails Master Plan (2010)^{xxx} – The plan identifies on and off-road facilities to promote the use of non-motorized modes of transportation such as hiking, cycling and walking. The network which was developed is intended to link walking and cycling with public transit, take into consideration roadway characteristics, and accommodate the wants and needs of different user groups. The plan identifies 343.2km of additional walking and cycling facilities as well as 53.46 km of multi-use trails. The plan identifies trail policies which direct implementation which are consistent with those facilities and routes identified in the York Region Pedestrian and Cycling Master Plan and the 10-year capital works plan.
Town of Innisfil	<ul style="list-style-type: none"> • Town Official Plan & Associated Schedules (2006)^{xxxi} – In Section 8.4 of the OP the Town of Innisfil outlines a municipal objective to develop a continuous pedestrian and bicycle trail system linking parks and community centres. The plan also recognizes the importance of considering cycling in all new development and redevelopment proposals. Lastly, the Town calls for municipal cooperation with the TransCanada Trail Foundation and any other surrounding Municipalities in future trail development initiatives as they arise. • Transportation Master Plan (2013)^{xxxii} – The plan is the first transportation master plan completed by the Town of Innisfil. The plan addresses existing and future automobile, transit, cycling and pedestrian traffic needs. The plan envisions a sustainable multi-model transportation system for the Town leading into the future and recommends that an incremental approach to improving active transportation facilities be adopted by the Town. The overall objective for active transportation is to achieve a proposed active transportation network and necessary connections with areas of interest to facilitate inter and intra-municipal connectivity.
Township of Brock	<ul style="list-style-type: none"> • Township of Brock Official Plan (2007)^{xxxiii} – The plan seeks to maintain ‘small town’ character through careful planning, growth management and the encouraging of economic development. • Physical Activity Plan (2008-2010)^{xxxiv} – The Township of Brock in partnership with community residents and stakeholders, created the plan increase the amount of accessible and economically viable recreational opportunities for Brock’s residents. The plan aims to provide the Town’s residents with the opportunity to live out a balanced and healthy lifestyle including employment, learning, culture, recreation and well-being. The plan is a long-term strategy for action designed to increase the levels of physical activity across the Town. The plan establishes active transportation recommendations which are based on supporting and



APPENDIX B



Table B.5 - Summary of Surrounding Municipal Policies and Plans

Policy Name	Policy Description
	developing a well-connected and community based trail network.
Township of Uxbridge	<ul style="list-style-type: none"> • Township of Uxbridge Official Plan (2012)^{xxxv} – This plan strategically outlines the direction the Town should take when addressing the development of the downtown area and surrounding communities, the sustainable management of population growth and the protection of the Town's environment and quality of life. As a key consideration within the Official Plan, the development and enhancement of Active Transportation facilities is highlighted as a priority. • Recreational Master Plan (2006)^{xxxvi} – The plan is a comprehensive analysis of recreation, culture and park needs present in the Township of Uxbridge. Based on increased levels of public support and desire for increased trail connectivity and development the plan establishes potential trail promotion infrastructure opportunities. Multiple recommendations related to the development of recreational facilities are identified as well as an implementation strategy to guide the Township during future decision making processes.

B.7 Lake Simcoe Regional Conservation Authority

Within the Town of Georgina there are a number of significant conservation areas which are considered key destinations for the trails and active transportation network. In addition to being key destinations, they also provide linkages to existing trail systems which are established on the land of the conservation authority. Information developed by the Lake Simcoe Regional Conservation Authority was gathered and summarized as part of the background information summary process. The information was used to inform the development of the existing conditions base mapping as well as an understanding of the policies and plans which guide the development of future linkages as well as the maintenance of those linkages.



Table B.6 - Lake Simcoe Regional Conservation Authority Policy Summary

Policy Name	Policy Description
LSRCA’s Natural Heritage System	The LSRCA’s Natural Heritage System for the Lake Simcoe watershed is based on the Provincial Policy Statement (PPS) and identifies a natural heritage system and a policy strategy to protect its features and functions. The ultimate goal is to secure and protect an additional 1,000 hectares (2,471 acres) of ecologically sensitive land within the watershed to ensure the natural functions of these lands are maintained, to provide for flood and erosion control and to conserve these important lands for the benefit of the people within the watershed. Target areas for land securement of ecologically sensitive lands have already been identified, along with evaluation criteria and securement protocols for this five-year project. Lands owned by the LSRCA comprise of valley and stream corridors, portions of the Lake Simcoe shoreline, environmentally significant areas, provincial wetlands, significant forest lands, flood control and reservoir lands, and properties in the Oak Ridges Moraine complex, as well as the Beaver River Wetlands. Approximately 2/3 of the LSRCA lands contain wetlands, which assists in achieving the Provincial objectives to preserve these unique environmentally sensitive areas.
LSRCA Focused Future 2014^{xxxvii}	This Strategic Plan set out by the LSRCA reflects the conservation authority’s mission to provide leadership in the protection and restoration of the environmental health and quality of Lake Simcoe and its watershed. The LSRCA set out strategic goals for the protection and restoration of Lake Simcoe based on an integration of their four pillars of Integrated Watershed Management; Science & Research, Protection & Restoration, Education & Engagement and Leadership & Support. Within the second pillar, the LSRCA’s desired outcome is for new amenities and trails to be developed that will increase community access and the overall enjoyment of the conservation area lands and natural features of the Lake Simcoe watershed.

B.8 Region and Town Committees, Organizations & Stakeholders

In order to successfully develop and implement a trails and active transportation master plan, a number of partners and interest groups must be identified and consulted. There are a number of municipally as well as regionally based committees, organization and stakeholders who should be consulted as part of the development of the network and master plan report. It is their input which will help to develop realistic and implementable solutions Town-wide. In addition, they will also be an asset for the funding, implementation and maintenance of some key linkages.



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TableB.7 - Summary of Town and Regional Committees, Organizations and Stakeholders

Town Committees, Organizations & Stakeholders	Regional & Surrounding Municipal Committees, Organizations & Stakeholders
<ul style="list-style-type: none">• Georgina Trail Riders Snowmobile Club• Georgina Trail Riders• Morning Glory Provincial Nature Reserve• Sibbald Point Provincial Park• Sibbald Point Cultural Trail• Maidenhair Fern Trail	<ul style="list-style-type: none">• York Regional Forests & Trails• Simcoe County Trails• Uxbridge Cycling Club• Nokiidaa Trail Association• Tom Taylor Trail Association• Lake Simcoe Trail



ⁱ Ministry of Municipal Affairs and Housing, Province of Ontario. “Provincial Policy Statement” (2005). Queen’s Printer for Ontario, 2005.

ⁱⁱ Ministry of Municipal Affairs and Housing. Government of Ontario. “Bill 51 – Plan Reform (Amendments to the Ontario Planning Act) (2007).

ⁱⁱⁱ Government of Ontario. “Municipal Act” (2001). Government of Ontario E-laws. http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_01m25_e.htm

^{iv} Government of Ontario. “Highway Traffic Act” (1990). Government of Ontario E-laws. http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90h08_e.htm

^v Government of Ontario. “Ontario Regulation 191/11 – Accessibility for Ontarians with Disabilities Act” (2005). Government of Ontario E-laws. http://www.e-laws.gov.on.ca/html/source/regs/english/2011/elaws_src_regs_r11191_e.htm

^{vi} Government of Ontario. Ministry of Community and Social Services. “Final Proposed Accessible Built Environment Standard” (July 2010).

^{vii} Government of Ontario, Ministry of Health Promotion. “Ontario Trails Strategy” (2010). Queen’s Printer for Ontario.

^{viii} Government of Ontario. Ministry of Transportation. “Transit Supportive Guidelines” (2012). Queen’s Printer for Ontario.

^{ix} Government of Ontario, Ministry of Infrastructure. “Places to Grow Act” (2005). Queen’s Printer for Ontario

^x Metrolinx Greater Toronto Transportation Authority. “The Big Move – Transforming Transportation for the Greater Toronto and Hamilton Area” (2008)

^{xi} Government of Ontario, Ministry of Municipal Affairs and Housing. “The Greenbelt Act” (2005). Queen’s Printer for Ontario

^{xii} Regional Municipality of York. “Vision 2051.” (2010)

^{xiii} Regional Municipality of York. “York Region Official Plan.” (2009)

^{xiv} MMM Group, Go for Green & Decima Research. “York Region Pedestrian and Cycling Master Plan.” (2008)

^{xv} Regional Municipality of York “York Region Transportation Master Plan Update” (2009)

^{xvi} Regional Municipality of York. “York Region Sustainability Strategy.” (2007)

^{xvii} MMM Group. “York Region Greenlands Trails System Concept Study.” (2011)



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- ^{xviii} MMM Group. “York Region Lake to Lake Cycling Route and Walking Trail Study” (2013).
- ^{xix} Town of Georgina. “Town of Georgina Official Plan (Office Consolidation 2010).” (2010).
- ^{xx} Monteith Brown Planning Consultants. “Town of Georgina Leisure Services Master Plan” (2004)
- ^{xxi} Planmac Engineering Inc. “Town of Georgina Environmental Assessment for the Maskinonge River Pedestrian Bridge.” (2013)
- ^{xxii} Town of Georgina. “Town of Georgina - Sutton / Jackson’s Point Secondary Plan.” (2010)
- ^{xxiii} Town of Georgina. “Town of Georgina – Keswick Secondary Plan.” (2004)
- ^{xxiv} South Lake Community Futures Development Corporation “Town of Georgina Socioeconomic Mission and Strategic Plan.” (2009)
- ^{xxv} Town of Georgina. “Pefferlaw Secondary Plan – Amendment No. 70 to the Official Plan for the Town of Georgina.” (2000)
- ^{xxvi} Town of Georgina. “Keswick Business Park Secondary Plan” (2008)
- ^{xxvii} MMM Group. “Town of East Gwillimbury Transportation Master Plan.” (2010)
- ^{xxviii} Beacon Environmental. “East Gwillimbury Official Plan Review: Natural Heritage System Study.” (2008)
- ^{xxix} Monteith Brown Planning Consultants. “East Gwillimbury Community Park, Recreation & Culture Strategic Master Plan” (2009)
- ^{xxx} MMM Group. “East Gwillimbury Active Transportation and Trails Master Plan .” (2010)
- ^{xxxi} Sorensen Gravely Lowes Planning Associates Inc.”Town of Innisfil Official Plan.” (2006)
- ^{xxxii} HDR Corporation. “Town of Innisfil Transportation Master Plan Draft Final Report.” (2013)
- ^{xxxiii} The Township of Brock. “Township of Brock Official Plan.” (2007)
- ^{xxxiv} The Township of Brock. “Physical Activity Plan 2008-2010.” (2008)
- ^{xxxv} Township of Uxbridge. “Township of Uxbridge Official Plan.” (2012)
- ^{xxxvi} dmA Planning & Management Services. “Strategic Master Plan for Parks, Recreation and Culture.” (2006)



^{xxxvii} Lake Simcoe Region Conservation Authority. “LSRCA Strategic Plan: Focused Future 2014” (2011)

Appendix C

Public Engagement Summary



C SUMMARY OF PUBLIC ENGAGEMENT

C.1 The Approach

Between July 2013 and December 2014 members of Town staff in collaboration with a consulting team from MMM Group undertook a two phased study to complete a Trails and Active Transportation Master Plan.

One of the key objectives of the study was to develop a Trails and AT Master Plan for the Town of Georgina based on local knowledge, understanding and input.

In advance of the study's initiation, the study team explored the use of different consultation initiatives to facilitate public engagement for people of all ages, abilities and interests. The engagement techniques that were confirmed formed a formal consultation strategy which was based on the primary goal of:

Successfully consulting with the public and local stakeholders to facilitate community involvement and consensus by bringing the consultation to the people.



The consultation strategy was used by the study team and the steering committee to guide consultation initiatives over the course of the study process. Each phase of the study was guided by a consultation goal / objective which helped the study team strategically select a range of public and stakeholder engagement activities. A summary of the consultation goals and objectives as well as the activities which were undertaken are presented in **Table C.1**. They have been organized based study phase.

Table C.1 – Summary of Consultation / Engagement Activities by Phase

Phase 1 Inventory & Analysis of Trails & Active Transportation Facilities	
Consultation Goal:	To provide the public with key background information and study findings from Phase 1 and to use input generated to identify network opportunities and barriers, key destinations and promotion and marketing opportunities.
Activities Undertaken:	<ul style="list-style-type: none"> • Public Awareness Campaign • Public Information Centre #1 • Online Questionnaire • Update Presentation to Town Council • Study Team / Steering Committee Meetings / Roundtable Discussions
Phase 2 Consultation Activities	
Consultation Goal:	To give the public the opportunity to “work” collaboratively with the study team to form key study deliverables including the trails and AT network and master plan recommendations.
Activities Undertaken:	<ul style="list-style-type: none"> • Ongoing Public Awareness (through Public Awareness Campaign) • Public Information Centre #2 • Study Team / Steering Committee Meetings / Roundtable Discussions • Presentation to Council

C.2 What we heard: A Summary of Input Received

At each point of public or stakeholder contact, the study team devised ways in which input / commentary could be gathered. Over the course of the study public and stakeholder representatives provided valuable input which was documented and incorporated as master plan deliverables were developed and refined.

The following sections provide an overview of the comments that were received for each of the public / stakeholder activities undertaken.

C.2.1 Public Outreach Campaign

The intent of the public outreach campaign was to increase public and stakeholder awareness regarding the study. The campaign was made up of a number of different outreach and promotion techniques including but not limited to:

- The development of a study webpage which was frequently updated by Town staff with relevant study information. More specifically, as key study deliverables were developed they were uploaded onto the study webpage for the public to review and provide commentary.
- The development of study notices including a notice of study commencement, notice of public information centres (for both #1 and #2) and a notice of study completion. Once finalized the notices were published in local newsletters and online to help promote more formal public and stakeholder engagement activities. On each notice the study team also suggested ways in which the public could get involved further (e.g. the online questionnaire or providing comments directly to study representatives).
- Existing Town social media outlets such as Twitter and Facebook were used to help promote the online questionnaire as well as the public information centres. In addition, as the study webpage was updated, media blasts were used to promote public commentary and input.
- A study promotional card which was used as another means of distributing key study information. This small business card sized hand-out was distributed at Town events and community locations / destinations and included key study information (e.g. study contact information and a link to the online questionnaire and study webpage).



- A mobile display board which was developed based on the study brand and used at key municipal locations to promote the study and how to get involved. The board was placed at a number of different locations throughout the municipality along with copies of the study promotional business card. Included on the mobile display was background information for the study, a QR code which allowed residents to access the online questionnaire using a smart-phone and contact information for study representatives and information on other means of staying engaged such as Public Information Centres and the online questionnaire.

Though no input was gathered directly from these methods of study promotion and engagement they helped to increase awareness which promoted increased attendance at the public information centres as well as responses to the online questionnaire.

C.2.2 Steering Committee / Study Team Meetings

Meetings with the study's steering committee were used to provide study updates, submit key study deliverables and to engage in ongoing discussion with Town staff regarding trail and active transportation planning and development. In total there were three Steering Committee Meetings held over the course of the study. The steering committee meeting dates and objectives are identified in **Table C.2**.

Table C.2 – Steering Committee / Study Team Meetings Overview

Date	Objectives
Steering Committee Meeting #1	
June 10th, 2014	A kick-off meeting to introduce to the team and to discuss opportunities, barriers and key considerations when developing the master plan. A draft consultation strategy was prepared and submitted for the Town's consideration in addition to draft consultation materials (e.g. study promotional business card and mobile display board).
Steering Committee Meeting #2	
September 16th, 2014	The meeting was used to confirm a number of materials which had been drafted and submitted to the Town in advance of the meeting including the study vision, goals and route selection criteria as well as the draft master plan table of contents. The draft candidate route network and route network concept were presented and discussed in detail with members of the study

Table C.2 – Steering Committee / Study Team Meetings Overview

Date	Objectives
	team along with the draft display boards for the first public information centre.
Study Team Meeting #1	
November 19th, 2013	The study team attending a meeting with a representative from a local development group to discuss the opportunities to develop trail and active transportation facilities in new development areas in the Town of Georgina. Proposed routes identified in secondary plans and development plans (e.g. Sutton / Jackson's Point Secondary Plan and Open Space Management Plan) were reviewed during the study team meeting.

During each meeting input was documented by a member of the study team and was consolidated into a set of meeting minutes. A copy of the meeting minutes for each meeting can be found in the project record. The comments provided were used to develop the network and recommendations found in the Trails and AT Master Plan.



Public Information Centre #1: Attendees engaging with Town staff - Source: MMM

C.2.3 Public Information Centres

C.2.3.1 Public Information Centre #1 – September 26th, 2013

The first Public Information Centre (PIC) was held at the Town of Georgina Recreation Outdoor Campus (ROC) on Thursday September 26th, 2013 between 6:30 p.m. and 8:30 p.m. The goal of the PIC was to



gather input from members of the public on the draft route network as well as potential opportunities and barriers in the Town of Georgina.

To help facilitate discussion between members of the study team and public representatives the event was organized as an informal “drop-in open house” where members of the public could review the display boards and maps for this study.

A public notice was developed to promote public attendance to the PIC. The notice was posted on the Town’s study webpage, in the local newspaper, SNAP magazine, and was emailed to all facility user groups and Town program participants along with those who completed the online questionnaire. The public notice provided details regarding the study context along with the date, time and location of the upcoming information centre.

Approximately 25 people attended the public information centre.

What did we hear?

Town staff and members of the study team had the opportunity to speak with a range of attendees including several residents of Lake Drive, a local planning consultant representative who attended to represent a number of developers in Georgina as well as the President of the Georgina Trail Riders Snowmobile Club.

Residents of Lake Drive, noted the importance of including an east-west link along the roadway as part of the Trails and AT Network. Support was also expressed for the development of the Lake to Lake Cycling Route and Walking Trail. Many considered this to be an opportunity to improve conditions for cyclists and pedestrians on Lake Drive and minimize impacts for residents along this roadway. Additional considerations and suggestions to improve conditions for pedestrians and cyclists on Lake Drive were provided including:

- Implementing sharrow markings along Lake Drive;
- Reducing the posted speed limit; and
- Designating Lake Drive as a one-way road for motor vehicles from late Spring to early Fall. Allocating the other travel lane for cyclists and pedestrians could increase safety and accessibility to key community destinations along Lake Drive.

The graphic below illustrates some of the comments which were received regarding future improvements to Lake Drive.



Public input on a Map Display Board to designate Lake Drive as a one-way road -
Source: MMM Group

The representative from the Georgina Trail Riders Snowmobile Club expressed his support for Trails and AT in Georgina. He also expressed interest in the development of a potential route along the Highway 404 extension (if or when the Highway is developed). He noted the potential for the Club to partner with the Town in the future. It is important to note that there was agreement regarding the use of municipally owned and operated off-road trails by snowmobiles. For the purposes of the master plan snowmobiling will only be permitted on Ontario Federation of Snowmobile Clubs (OFSC) signed trails.

Attendees provided recommended potential trail connections which could be explored later in the study process. Though considered desirable, several of these routes had already been assessed during field investigations and were removed from the draft network concept due to conflicts with private lands and / or difficult topography (e.g. wetlands).

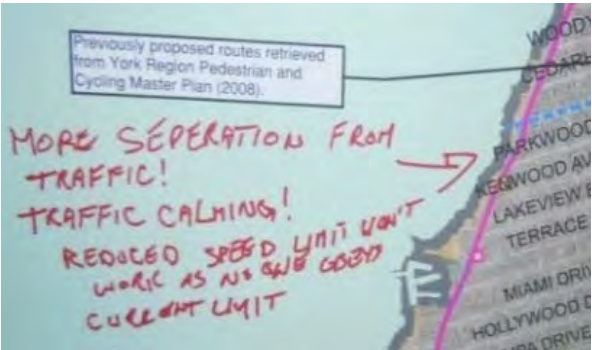
Overall, attendees were very supportive of making improvements to Trail and AT facilities Town-wide. Through a number of interactive mapping exercises they were able to identify additional existing facilities as well as trail and AT connections for additional consideration.

Documenting the Comments Received

As a means of gathering input from PIC attendees, the study team developed and provided a set of interactive display boards. The display boards were used to gather input about the candidate route network, the route network concept as well as their thoughts on the different route selection criteria prepared and used to refine the proposed routes.



Attendees were encouraged to ask questions to members of the Study Team and to mark their comments directly onto the maps. The graphic below illustrates a comment that was documented on the map display boards.



A comment suggesting more separation from traffic or the inclusion of traffic calming to reduce speeds along Lake Drive.

Additional comments provided on the interactive mapping display boards are documented in **Table C.3**.

Table C.3 – Summary of Key Input Documented on the Interactive Mapping Display Boards

Key Highlights from Input Received
<ul style="list-style-type: none">• Need to develop more off-road active transportation trails.• More separation from traffic on Lake Drive South is needed.• Reducing the speed limit on Lake Drive will not work as no one obeys the current posted speed limit.• Lake Drive needs to be one-way only during the summer season.• Who is responsible for maintenance of the multi-use trails in Metro Road Tract?• Is the trail access point in Metro Road Tract open or closed?

In addition to interactive display boards, attendees were also provided with a comment form which they were able to answer questions and provide additional input. **Table C.4** summarizes some of the input which was received through the submission of comments forms.

Table C.4 – Summary of Key Input Received from PIC #1 Comment Forms

Key Highlights from Input Received
<ul style="list-style-type: none">• Better access is needed to the ROC for kids on bikes.• Georgina has many great facilities that need to be tied together with one trail system as the ROC as a hub.• Need to develop all-terrain trails for bikes.

Table C.4 – Summary of Key Input Received from PIC #1 Comment Forms

Key Highlights from Input Received
<ul style="list-style-type: none"> Hunting should be prohibited on trails. Trail opportunities are great to attract visitors and to improve the quality of life and health of residents. It is unfortunate that global warming is reducing the impact of what can be done with winter trails. Speed is a major issue. Reducing speed limits will not improve the situation on Lake Drive South without enforcement. The width of the Lake Drive South is not consistent. This does not provide pedestrians with enough room to get out of the way from oncoming traffic.

Visibility Trails and AT routes / corridors should be a visible component of the overall transportation and recreation system.		Sustainability Sustainability will be a key consideration in the alignment, design and selection of materials for on and off-road Trail and AT facility types.	✓
Connectivity / Linkages The Trails and AT network should link the Town's urban and rural communities, areas of cultural and natural significance and key destinations in addition to providing connections to surrounding municipalities. Routes should be easily accessible from the Town's communities and link to the Region's existing and proposed pedestrian and cycling network.	✓✓✓✓✓	Cost-Effectiveness The cost to implement and maintain the Trails and AT network and supporting facilities / amenities under the Town's jurisdiction should be phased over time and designed to be affordable and appropriate in scale for the Town. New Trail and Active Transportation infrastructure in growth and new development areas should be developer funded and include the cost of connections to existing boundary Trail and AT infrastructure. User safety will not be compromised in the interest of cost.	
Accessibility Where possible and practical, off-road routes should be accessible and AODA compliant. It is recognized however, that not all off-road routes will be accessible in all locations. Routes should be appropriately signed at staging areas to communicate level of accessibility.	✓	Context-Sensitive Design Facility design for individual routes should follow widely accepted guidelines (such as Ontario Traffic Manual (OTM) Book 18: Bicycle Facilities and OTM Book 15: Pedestrian Crossing Facilities), but may also be modified to respond to the immediate surroundings.	
Integration The network should be integrated with other modes of transportation (e.g. transit) and recognize existing designated snowmobile and ATV routes. Routes will provide access to existing and future planned transportation hubs to facilitate utilitarian travel.	✓	Comfort & Safety Reducing risks to users and providing comfortable facilities will be a key consideration when selecting routes for the network. The decreased perception of risk can increase confidence in users.	✓✓✓✓✓
Diversity Provide a diverse and balanced on and off-road trails and AT experience throughout the Town. The system should appeal to a range of user abilities and interests.	✓	Visual / Cultural Experience Routes should take advantage of attractive and scenic areas, views and vistas. Routes should provide users with the opportunity to experience the cultural and natural heritage found throughout the Town.	✓✓✓✓

Comments from the Route Selection Criteria Interactive Board

Source: MMM Group

As noted above, attendees were also asked to provide their input on the route selection criteria. A chart was developed documenting the route selection criteria prepared. Attendees were asked to place a mark beside those criteria that they support.

The input marked onto the interactive display indicates that respondents value the following criteria when selecting a trail or active transportation route over some of the others:



- Connectivity / Linkages;
- Comfort and Safety; and
- Visual / Cultural Experience.

All of the comments received from the first Public Information Centre were used to refine and update the draft network of Trails and Active Transportation routes and many were incorporated into future master plan recommendations and proposed initiatives.

C.2.3.2 Public Information Centre (PIC) #2 – November 28th, 2013

The second PIC was held on Thursday November 28th, 2013 between 6:30 p.m. and 8:30 p.m. and was also strategically located at the ROC. The approach used to present the study findings was consistent with the first session - informal “drop-in open house” session – where attendees were encouraged to review materials at their leisure, speak with study team members and document their thoughts / comments.

The goal of the second PIC was to provide the public with the opportunity to comment on the draft Trails and AT Network including proposed facility types and route phasing. Attendees were also encouraged to review key master plan recommendations / promotion and outreach initiatives for consideration as part of the master plan report. Study findings were presented using a set of informational and interactive display boards.

A public notice was developed and posted on the Town’s webpage, in the local newspaper and local SNAP magazine and was emailed to those who had responded to the online questionnaire, those who attended the first PIC and local stakeholder contacts.

In total, the study team spoke to approximately 16 people.

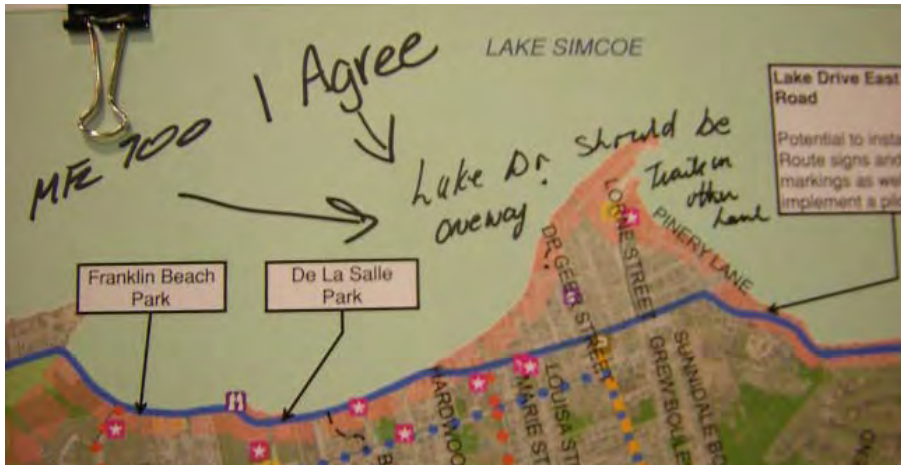
What did we hear?

Attendees of the second PIC included a number of public and stakeholder representatives including a local planning consultant (who had previously attended PIC #1) and a Regional Councillor.

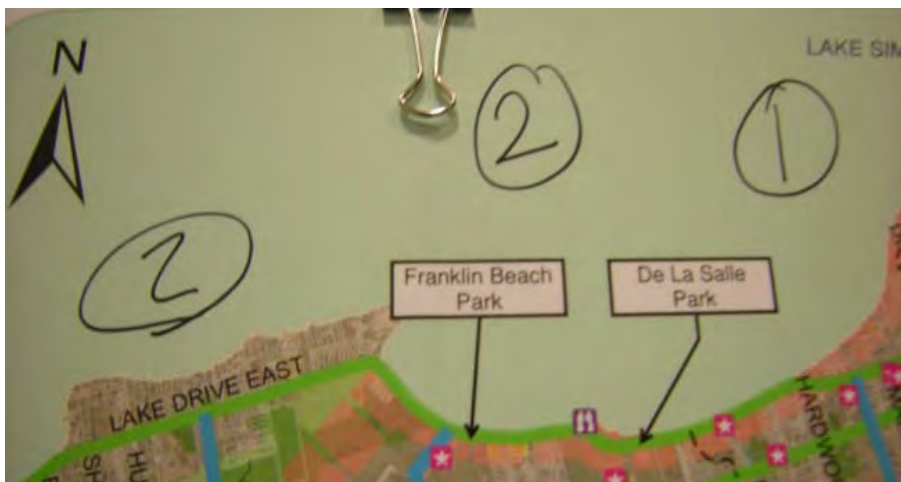
Similar to PIC #1, many attendees used the PIC as an opportunity to note the importance of including a connection along Lake Drive as part of the Trails and AT Network. Attendees expressed considerable interest in converting Lake Drive from two-way to one-way which would allow cyclists and pedestrians to travel in one lane while motorists used the other.

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This change in the organization of transportation modes and increased separation from motor vehicle traffic would increase safety (perceived and real) and accessibility to key destinations along this major connection. Attendees suggested the implementation of an active transportation facility along Lake Drive in the short term phase (0-5 years). The graphics below illustrate public interest to implement an AT facility along Lake Drive.



Public input on a Map Display Board to convert Lake Drive to a one-way road - Source: MMM Group



Documentation of comments submitted regarding a potential connection along Lake Drive - Source: MMM Group



During discussions with PIC attendees, study team members heard a number of recurring comments which are documented in **Table C.5**.

Table C.5 – Summary of Comments Received through Discussions with Attendees at PIC #2

Summary of Discussions
<ul style="list-style-type: none">• Strong support for a Lake Drive Pilot Project expressed by many attendees.• Encourage people who visit Georgina Beaches and Parks as well as the local cycling trail system to shop and eat at local shops.• Trails are great to attract residents but they should also be used to attract new businesses / employers (e.g. Business Park) and new employees.• Engage the area’s Regional Tourism Organization (RTO) to promote Georgina as a trail / cycling destination.• Link trails with local economic development.• Pavement markings do not last long on rural roads.

One of the major themes that came from discussions with PIC #2 attendees was the demand for increased safety when designing trail and AT facilities. A lack of infrastructure and education related to trail use and AT activities can lead to an increased perception of risk and can in some cases decrease a user’s level of confidence. By implementing the master plan network and recommendations the Town is confident that they will be able to provide residents and visitors with more safe and comfortable active transportation and recreation alternatives.



Attendees providing input directly on map boards – Source: MMM Group



Documentation of Received Comments

The study team prepared a number of materials to help facilitate the documentation of input from public attendees. As noted above interactive map boards were developed which illustrated the proposed Trails and AT Network including proposed facility types. Attendees were asked to provide their comments directly on the map regarding route refinements, facility type suggestions, additional considerations, etc. **Table C.6** is a summary of the comments that were provided on the map boards.

Table C.6 – Summary of Comments Received on Interactive Mapping Display Boards

Input Received from Proposed Network Map Board
<ul style="list-style-type: none">• Improve bike access along the Queensway.• Need to restore access on Morton Avenue.• The drainage ditch connecting to Verona Crescent needs to be made a formal access route.• Lake Drive should be a one-way road. Several other attendees agreed with this and marked their interest on the map board.• Opportunity to provide a connection along North Street to Burke Street should be investigated in Sutton.• Consider implementing a dedicated bike lane along Ravenshoe Road to Brown Hill Tract.• An off-road connection between Old Homestead Road and The ROC was drawn by an attendee to show interest in providing a connection in this area.• Consider developing a possible connection to Metro Road Tract and Brown Hill Tract via an off-road trail in partnership with York Region Forestry.• High Street is very busy. It is safest to ride on local streets north east of this location.• The proposed paved shoulder on Lakeridge Road / Durham Road 23 should connect to Durham trails.

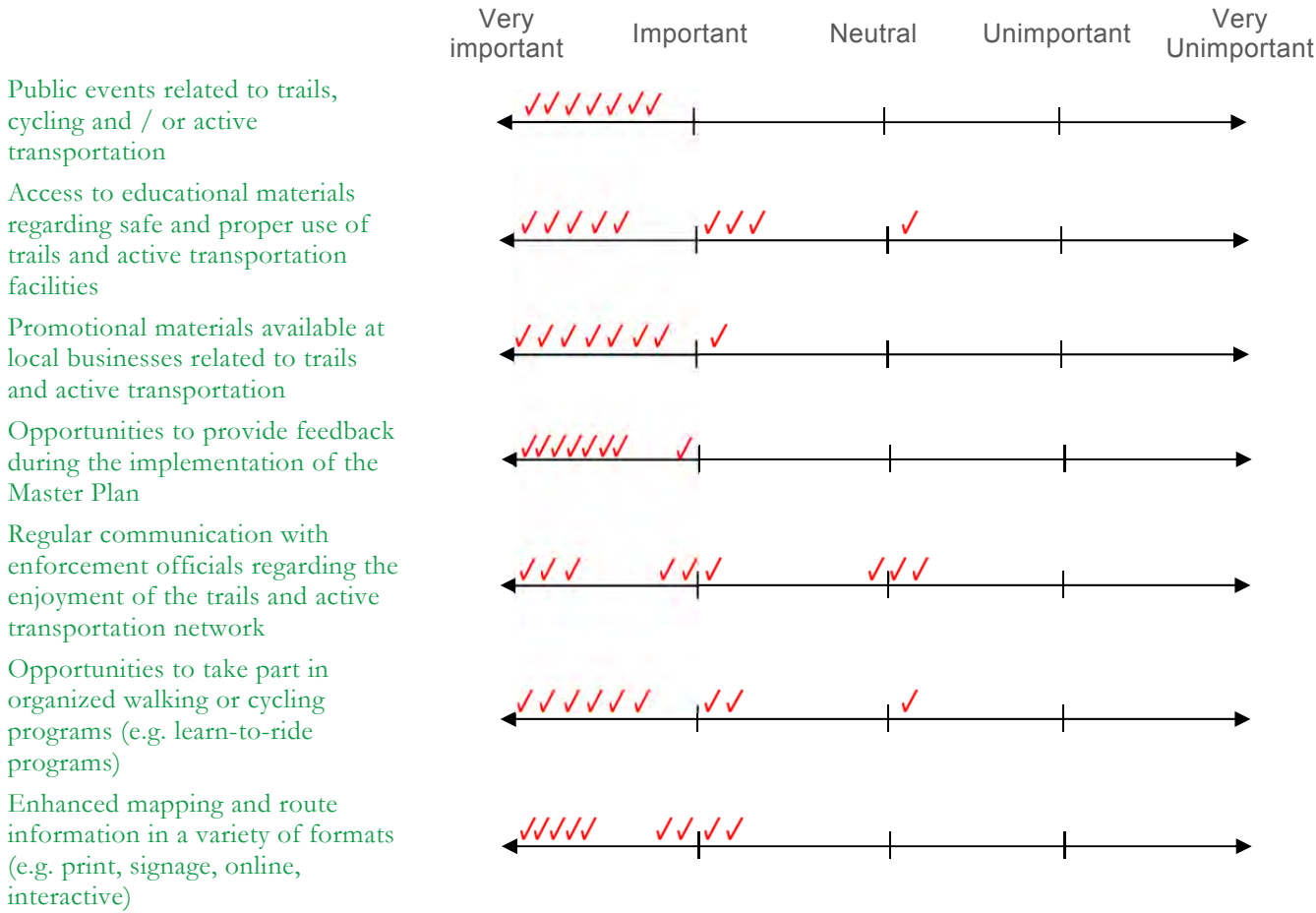
Attendees were also asked to review the proposed phasing plan for the Trails & AT network to comment on and identify potential short-term priorities. The Phasing Map was presented as an interactive display where attendees were encouraged to rank their top three route priorities using numbers ‘1’, ‘2’ and ‘3’ placed along proposed segments. **Table C.7** summarizes the input provided.

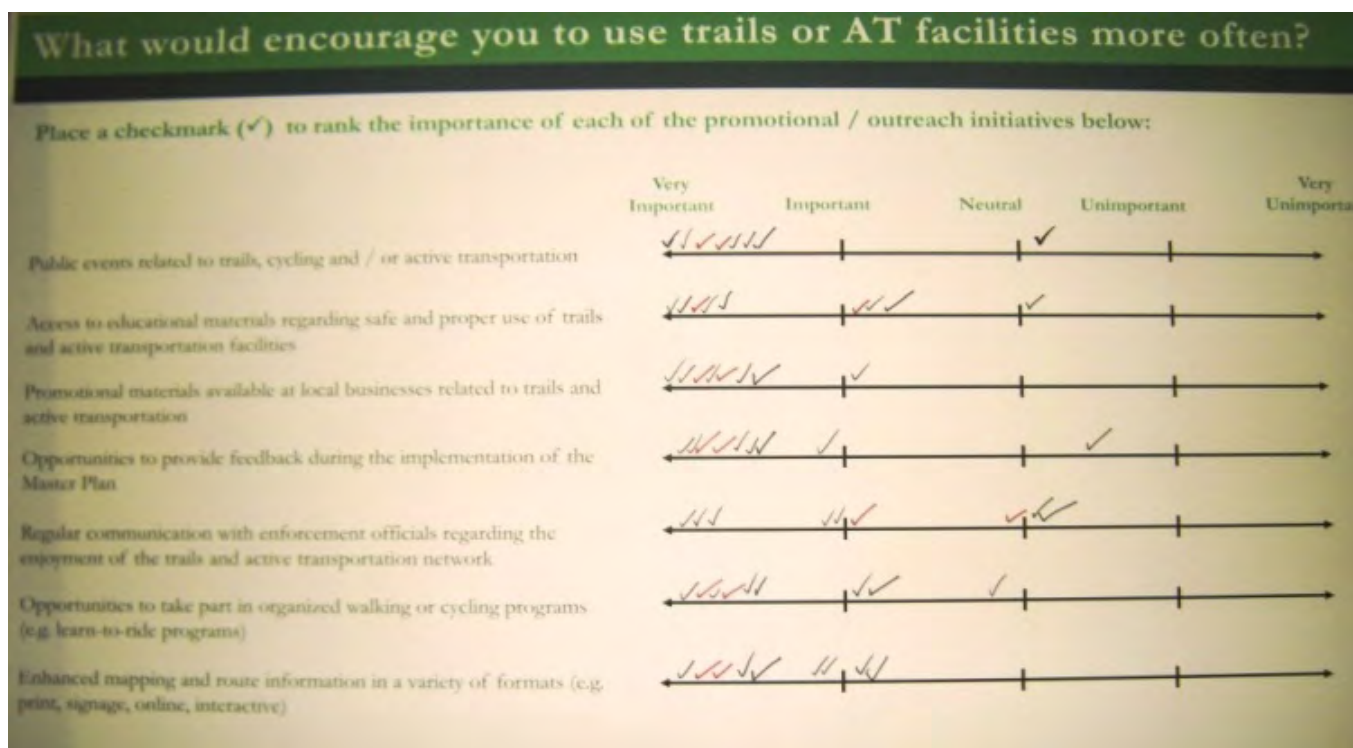


Table C.6 – Top Trail & AT Segments Identified for Short-Term Implementation

Input Received from Network Priorities Map Board
<ul style="list-style-type: none">• Lake Drive• Ravenshoe Road• The Queensway North / South• Duclos Point Road / Park Road (Connection into Duclos Point)• Lakeridge Road / Durham Road 23

The final interactive board asked attendees to rank the level of importance they placed on suggested promotion and outreach initiatives. The initiatives which were identified are intended to be used to help promote the use of active transportation and recreation facilities, educate users on the safest ways to do so and to increase a users’ level of comfort. The following figure is a representation of the input which was gathered. A photograph of the final board is provided below.





Photographic Documentation of Input Received from Ranking Display Boards – Source: MMM Group

Input received indicates that attendees most value the following promotional / outreach initiatives:

- Opportunities to provide feedback during the implementation of the Master Plan.
- Public events related to trails, cycling and / or active transportation.
- Promotional materials available at local businesses related to trails and active transportation.
- Enhanced mapping and route information in a variety of formats (e.g. print, signage, online, interactive).

In addition to the interactive display boards, attendees were also provided with a comment form which posed additional questions about the master plan and provided attendees with another means of documenting their comments on the information presented.

Table C.8 summarizes the input received via the comments forms.



Table C.8 - Summary of Input received from PIC #2 Comment Forms

Input Received form the PIC Comment Forms

- Lake Drive should be a one-way street. The other lane could be strictly for biking, jogging, walking and roller blading.
- Adding sharrows on the road will not increase safety.
- The old rail trail (Zephyr Rail Trail) needs to be improved for multi-purpose use and non-motorized summer use.
- The gates on the old rail trail at the Black River prevent easy passage of cyclists. Bicycles need to be lifted over the gates.
- The old rail trail needs better signage and surface improvements.
- Dalton Road is not safe for cycling.

The comments received at or following the second PIC were used to refine the Draft Trails AT Network and Phasing plan. They were also used to identify and / or refine master plan recommendations and promotion and outreach initiatives. In general, it can be concluded that all those that attended were very supportive of improving trail and active transportation facilities Town-wide and looked forward to the development and adoption of the master plan by Town Council.

C.3 Understanding the Trends: A Summary of Online Questionnaire Results

As a means of understanding current transportation trends, issues and opportunities as well as future wants and needs of Town residents related to trail and active transportation development, the study team prepared and hosted a web-based questionnaire. The questionnaire was developed using the online service SurveyMonkey (www.surveymonkey.com) and was hosted between June 2013 and January 2014. The questionnaire, although not statistically valid, provided the study team with valuable information which provided the study team with some baseline data on existing active transportation and trail trends which helped to inform the development of the network and key master plan recommendations / initiatives.

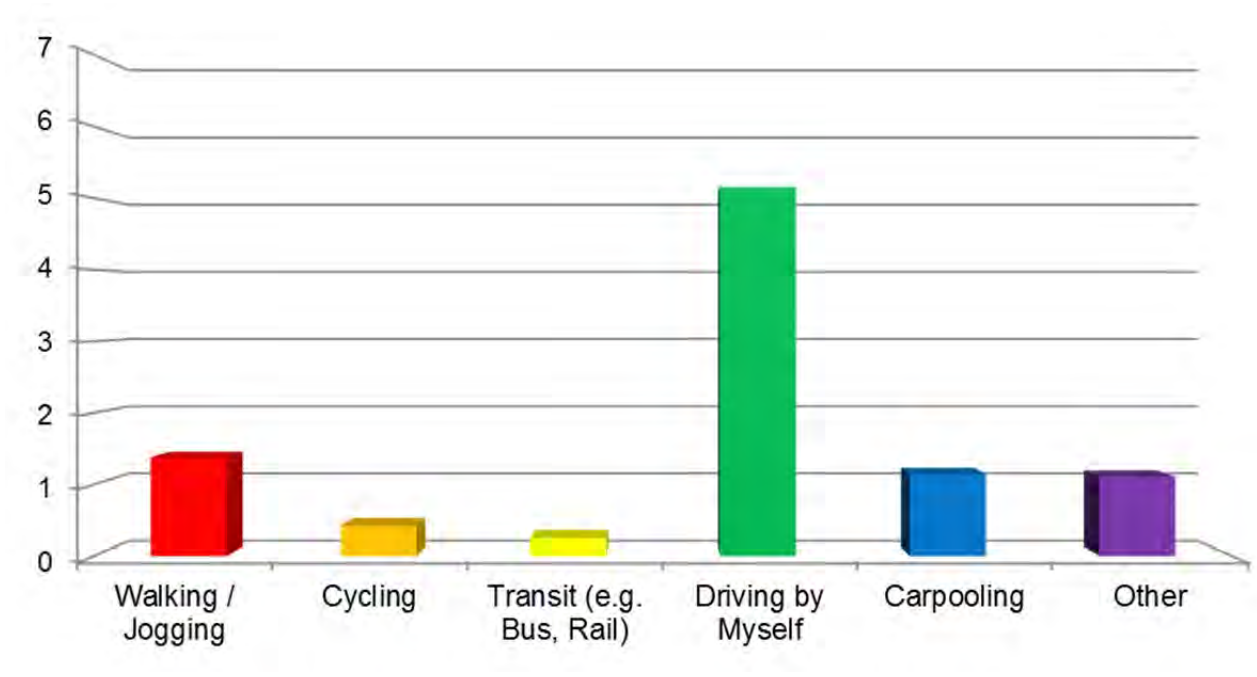
As previously stated in Section 1.0, at the same time that the Trails and Active Transportation Master Plan was being developed by MMM Group, Monteith Brown Planning Consultants (MBPC) was undertaking a study to assess the need for additional Recreational Facilities. Given the two studies were undertaken in parallel, the online questionnaire provided respondents with the opportunity to comment on both the Trails and AT master Plan and the Recreation Facility Needs Study. The Trails and AT Master Plan portion was comprised of 12 questions and was intended to be a short data gathering exercise. The questionnaire received a total of 288 responses for the Trails and AT component.

As noted above, the results which were generated were a significant resource in the development of the master plan. The results provided a varying amount of information on both existing and future Trail and AT considerations which helped to mold key study findings.

The following figures and tables provide a summary of key questionnaire results and have been organized based on their order in the questionnaire. For a summary of findings please refer to **Chapter 3.0**.



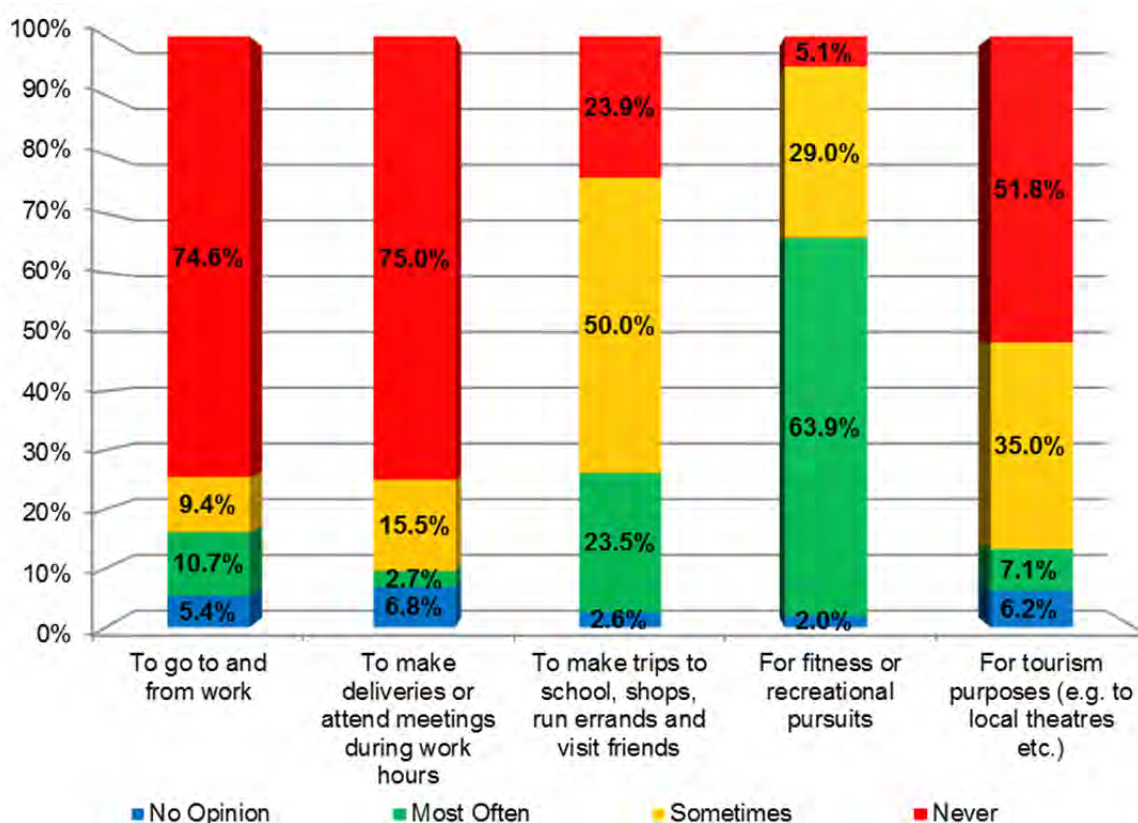
Question 2: Thinking about your typical week, please identify the number of days a week (between 0 and 7) you travel to and from your place of work, school, or other most frequent destination using the following modes of transportation.



Response Findings: Respondents tend to drive by themselves 5 to 7 days a week to and from their place of work, school and other destinations.

Potential Conclusions: This identifies the potential for increased levels of active transportation and recreation should additional infrastructure be developed and encouragement techniques geared towards year-round and seasonal residents be developed. Though, it is not realistic to expect people to walk or cycle year-round or for every trip given the climate and the geographic make-up of Georgina, there is still much opportunity to increase the frequency of these types of activities.

Questions 3: Please select the reasons why you use active transportation (walking, cycling, skateboarding, etc.) within the Town of Georgina.

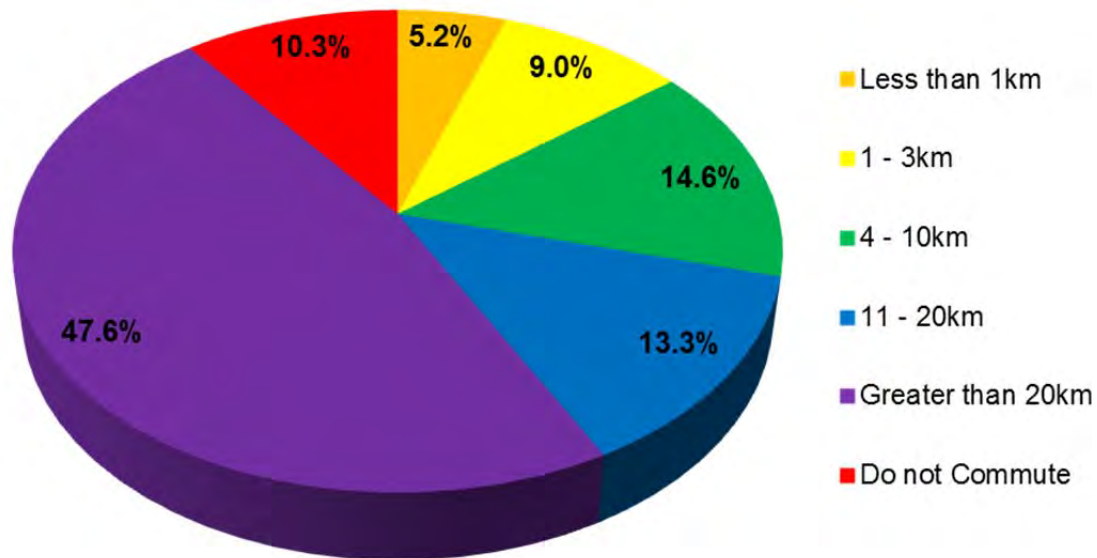


Response Findings: 92.9% of respondents engage in active transportation for recreation or fitness purposes “most often” or “sometimes” followed by those who use active transportation to make trips to school, run errand and visit friends (73.5%) and for tourism purposes (42.1%).

Potential Conclusions: The results generated from this question support a common trend in many municipalities comprised of a mix of urban and rural land uses. When communities are further apart and commuting distances increase there is a decrease in trips made by active forms of transportation as shown by the 74.6% of respondents who never use AT to go to and from work. These results could occur due to the lack of infrastructure or current land use planning trends. Another interesting result is the large number of respondents who engage in AT for tourism purposes. Considering Georgina’s seasonal population and areas of natural and cultural significance there is a potential to increase the number of AT and cycling tourists in Town.



Question 4: What is the approximate distance from home to your workplace / school?



Response Findings: Based on the responses, 28.8% of respondents live within 10 km or less of their workplace or school and 60.9% have a commute of 10 km or greater. Those who do not commute to work or school make up 10.3% of respondents.

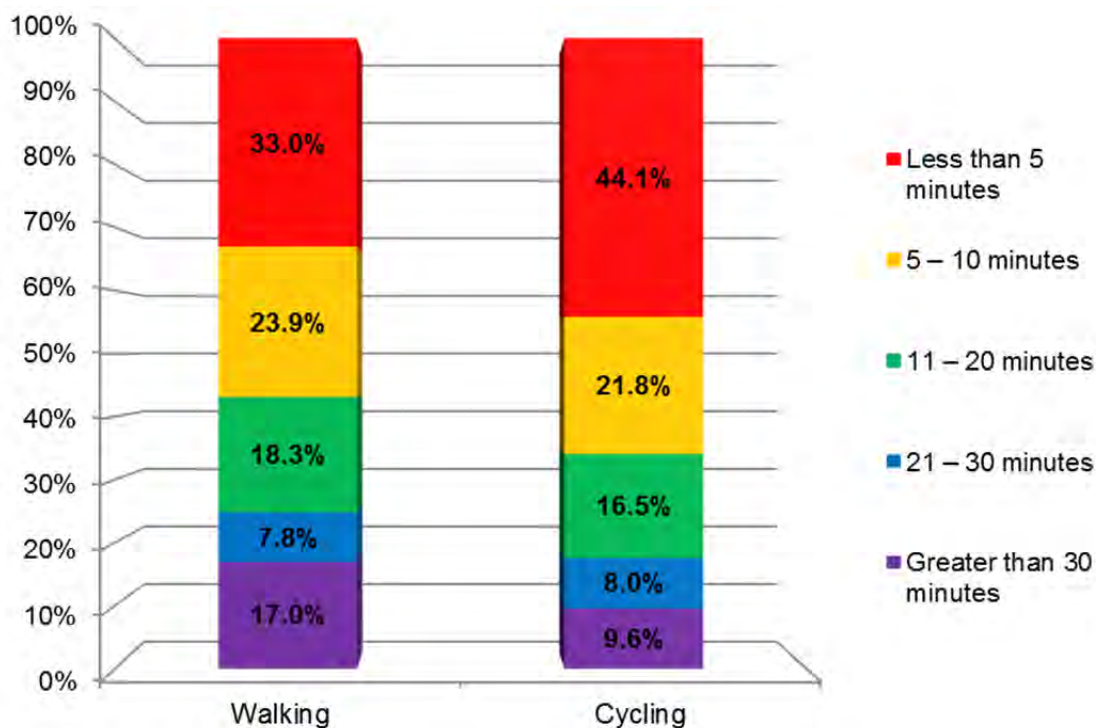
Potential Conclusions: Research shows that individuals who have a commute of 10 km or less are more likely to be willing to explore cycling as an alternative mode of transportation to an automobile. As such, there is potential to increase the number of local commuters who integrate active forms of transportation into their day to day activities. Though there are respondents who live within 10km or less of their place of work or school there are a greater number of respondents who have a commute greater than 10 km. The greatest number of responses were for commute distances greater than 20 km (47.6%). The responses / trends from question #4 support and are consistent with the responses and conclusions which can be drawn from Question #3. As commuting distances are typically greater than 20 km people will be less likely to use AT to get to and from work or school. The 10.3% who did not have a commute to report represent a potential population who could be encouraged to engage in more active forms of recreational transportation as opposed to active transportation for commuting purposes.



APPENDIX C



Question 5: How long does it normally take you to access the nearest major trail or active transportation facility (e.g. bike lane, multi-use trail, paved shoulder) on foot or by bike?

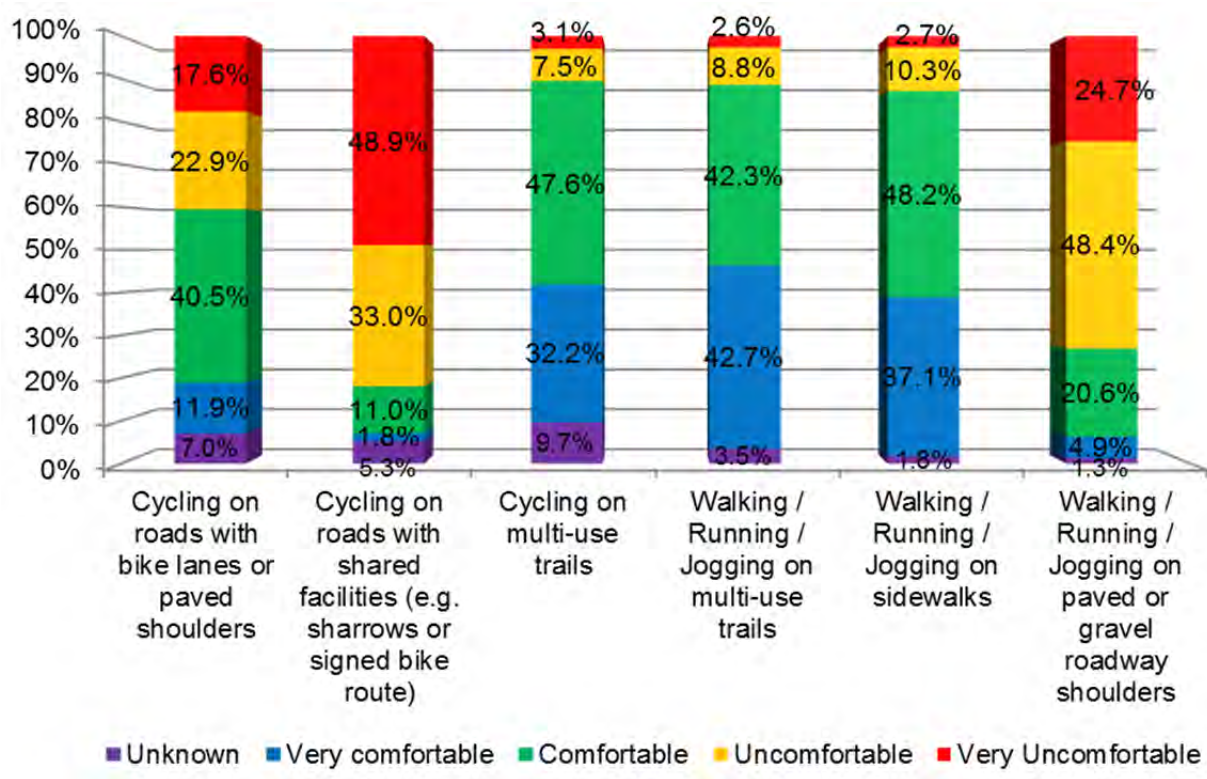


Response Findings: 33.0% of respondents reported less than 5 minutes travel time to access the nearest major Trail or AT facility by foot and 44.1% by bike. 23.9% of respondents reported that it took them 5 to 10 minutes to access the nearest major Trail or AT facility by foot and 21.8% by bike.

Potential Conclusions: From these results it is clear that a great number of respondents have direct access to a formal trail or active transportation facility within a very short travel time. The variation in the amount of time was expected due to the different average speed for each mode. As 56.9% of respondents are within a 10 minute or less walking trip and 65.9% are within a 10 minute or less cycling trip, there is a great potential to increase the number of users on these existing facilities and could also indicate a high demand for new / additional facilities.



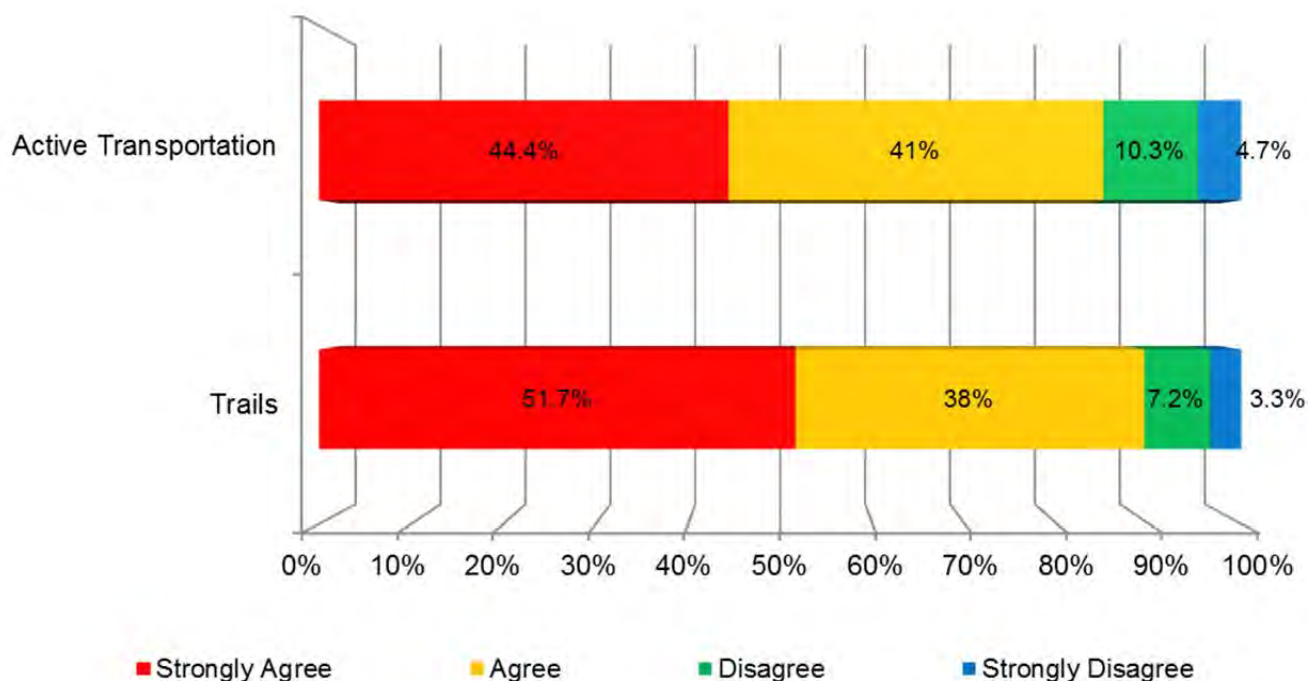
Question 7: For the Trails and Active Transportation facility types listed below please indicate how comfortable you are walking or cycling on each.



Response Findings: Based on the responses, it is clear that most people are comfortable with walking / running / jogging on multi-use trails (85%). Respondents indicated lower comfort levels when cycling on roads shared facilities without bike lanes such as signed bike routes (81.9%).

Potential Conclusions: Research shows an increased level of comfort or a perceived sense of safety as separation increases between cyclists, pedestrians and motorists. As such the conclusions from this question are in line with many other trends in the active transportation field of research. Though separation increases levels of comfort for users it does not necessarily increased levels of safety. Research shows that by providing any form of facility and increasing awareness through education campaigns, promotional materials, signage and mapping people’s level of comfort will increase as will their perception of safety. As such, it may be the implementation of new facilities combined with a robust educational campaign that will help respondents feel more comfortable with a range of facility types.

Question 8: Should the Town of Georgina invest in more trails and active transportation infrastructure and opportunities throughout the Town and to surrounding communities?

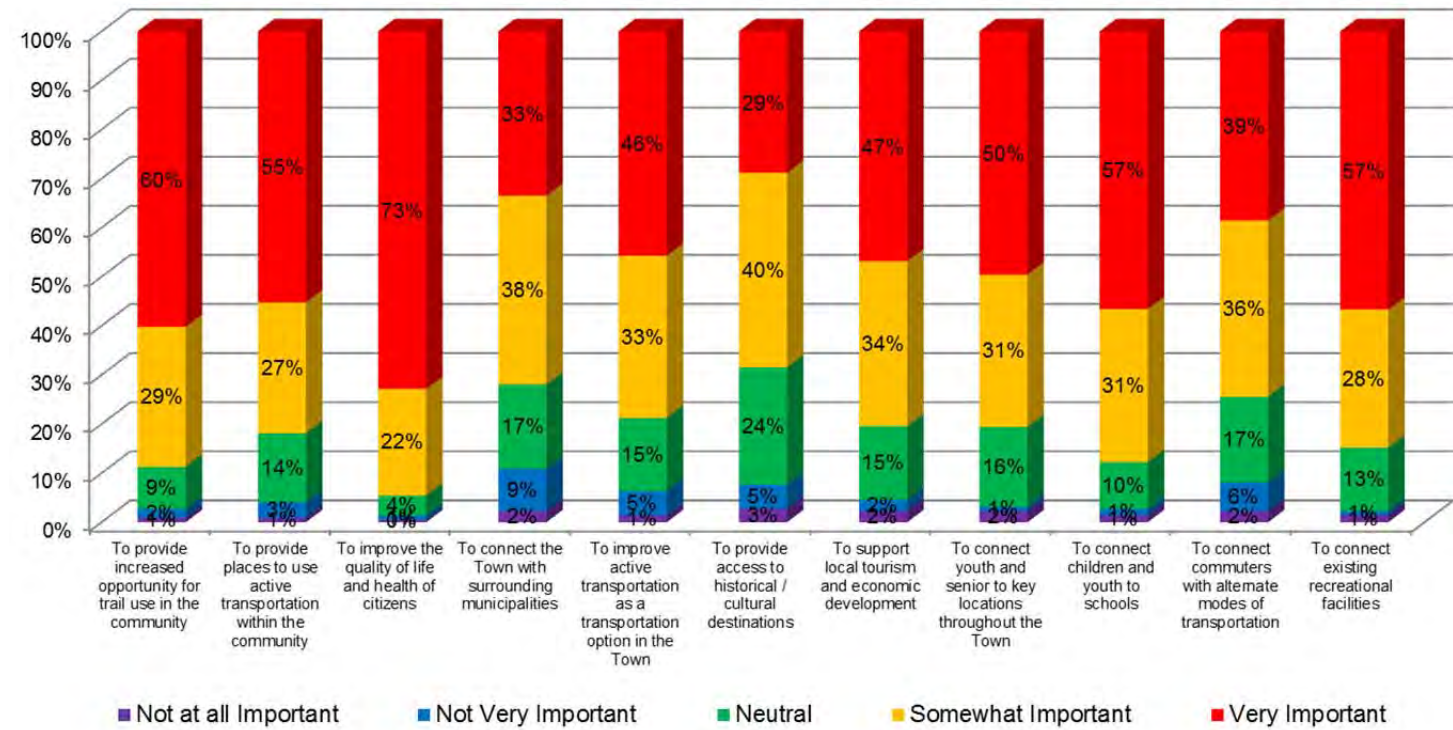


Response Findings: Respondents are generally supportive of the Town investing in more Trails and AT infrastructure. 89.5% of respondents “agree” or “strongly agree” that the Town of Georgina should invest in more trails and 85.0% “agree” or “strongly agree” that the Town of Georgina should invest in more AT infrastructure.

Potential Conclusions: Many of the decisions which are made by Council are influenced by the wants and needs of members of the public. These results help to show Council and Town staff that their residents are interested and supportive of the Town’s commitment to the development of Trail and AT facilities and infrastructure within Georgina. More than half of the respondents either “agree” or “strongly agree” with future investments over other municipal investments, however, funding of the Trails and AT plan does not need to solely come from municipal funds. The Town has a number of opportunities to partner with local stakeholders, interest groups, the Region, the Province, etc. to leverage funds in support of Trail and AT development.



Question 9: Please indicate how important each of the following reasons are for developing a long-term Trails and Active Transportation Master Plan for the Town of Georgina.



Response Findings: Respondents indicated that the Town of Georgina should develop a trails and active transportation master plan to improve the quality of life (95%) and to provide increased opportunity for trail use in the community (89%).

Potential Conclusions: As noted earlier, one of the primary reasons for Georgina residents and visitors engaging in active transportation and recreation is for fitness and leisure purposes (see Question #1 results). As such, it is plausible that most people would value the increased quality of life that can result from developing a long term Trails and AT strategy. In addition, as noted in Question #8 there is significant support for the Town's investment in trails and AT development. Increased investment leads to increased infrastructure which can increase the number of opportunities for trail and AT use throughout the community. The third highest scoring reason is to connect existing recreation facilities. As shown through a number of questionnaire responses the greatest number of activities are typically for recreational purposes. It would make sense that a community who values recreation would want to provide more connections to access those facilities.

APPENDIX C

Question 10: What are the top 3 locations in the Town of Georgina or within the surrounding communities that you would like to bike or walk to?

Respondents identified the following as important locations to bike or walk to in the Town of Georgina:

- Recreation Outdoor Campus (ROC)
- Georgina Ice Palace
- Lake Drive
- Georgina Leisure Pool
- Keswick Library
- Jackson's Point
- Sutton
- Sibbald Point Provincial Park
- Regional Forest Tracts

Top Locations (top to bottom): Recreation Outdoor Campus (ROC), Georgina Ice Palace / Keswick Library, and Sibbald Point Provincial Park.



Question 11: What are the 3 most important locations where improvements need to be made so that trail and active transportation use will increase in the Town of Georgina?

Respondents identified the following as important locations to improve conditions for trail and active transportation use:

- Lake Drive
- The Queensway
- Hedge Road
- Ravenshoe Road
- Connections to Pefferlaw
- Dalton Road

Most important locations for Improvements (top to bottom): Lake Drive East, The Queensway and Dalton Road.



Appendix D

Trails & AT Design Guidelines



D TRAILS & AT DESIGN GUIDELINES

D.1 Introduction

The guidelines prepared for the Town of Georgina's Trails and Active Transportation Master Plan should be treated as a reference for the development and construction of the network. Although they are meant to provide guidance for a range of conditions typically encountered in a municipal-wide network, they are not intended to address every condition encountered.

The information included in this Appendix is not meant to be prescriptive nor is it intended to replace "sound engineering judgement". The intent is to have regard to the individual guidelines while considering context sensitive conditions when implementing facilities at specific locations to arrive at the most appropriate solution. In some cases an interim solution may be appropriate where the desired long-term solution cannot be achieved in the short or mid-term. When implemented, the interim solution should meet users' needs and safety considerations.



Though the guidelines have been prepared for the Town of Georgina's reference, those responsible for designing and implementing facilities should use the following design guidelines / standards as the primary reference for facility selection:

- Ontario Traffic Manual (OTM) Book 18 (Bicycle Facilities)
- OTM Book 15 (Pedestrians)
- Transportation Associations of Canada Bikeway Control Guidelines
- Accessibility for Ontarians with Disabilities Act, 2005, Amending O. Reg. 191/11. Part IV.1 design of Public Spaces Standards (Accessibility Standards for the Built Environment)

D.2 Using the Design Guidelines

The Purpose:

To assist Town staff in making informed decisions about Trails and Active Transportation (AT) facility design.

How to Use the Guidelines:

- The guidelines provide general information on cyclists and pedestrians and their needs.
- Where appropriate, summary tables are provided which highlight recommended design treatments and/or considerations when designing trail and active transportation facility types and amenities.
- The information included in these guidelines is thought to represent accepted design practices in North America, and incorporates ongoing research and experience by the consulting team and other professionals involved in trail and active transportation facility design.

Trail and Active Transportation Guidelines

D-1:

Adopt the trail and active transportation design guidelines presented in Appendix C of the Town of Georgina Trails and Active Transportation (AT) Master Plan as the basis for the design of trails and AT Town-wide.

D-2:

Town staff should distribute the trail and AT design guidelines to trail designers and builders e.g. conservation authorities to ensure consistent trail design and implementation Town-wide.

D-3:

Town staff should supplement the Master Plan design guidelines with additional resources including but not limited to the Ontario Traffic Manual (OTM) Books 18 and 15 and other best practices as they emerge.



D.3 Considerations when Designing for Trail and Active Transportation Users

Many elements design need to be considered when a trail or AT facility is being developed and implementation. The elements can vary depending on location and are driven by context-sensitive conditions. Some of the characteristics which should be considered when proceeding to the design and implementation stage of facility development include:

- New construction versus upgrading existing trails;
- Trail location;
- Context (urban, rural or suburban);
- Level of separation (on vs. off-road);
- Width;
- Surface type;
- User groups;
- Level of use;
- Seasonal versus year round use;
- Gradient;
- Accessibility;
- Degree of difficulty;
- Length;
- Ownership;
- Sustainability and ability to maintain;
- Access points;
- Transition points / linkages;
- Context sensitive conditions;
- Road crossings; and
- Signage.

Details regarding some of the considerations listed above are provided in sections D.3.1 – D.3.10.



D.3.1 THE USER GROUPS

The characteristics and preferences of potential users can be the driver behind how a trail or AT facility is designed. If users experience a sense of comfort and safety when engaging in trail or AT activities they are more likely to continue to do so again.

For the purposes of the Town's Trails and Active Transportation Master Plan, pedestrians and cyclists are assumed to be the primary user groups. However, there are also secondary user groups such as inline-skaters, skateboarders, ATVs and Snowmobiles that have also been considered and are expected to be seasonal users of the system.

It is acknowledged that other user groups such as Equestrians, All-Terrain Vehicle (ATV) operators and snowmobilers currently own, operate and use some of the trails found throughout the Town. Motorized trail users have not been considered within the Town of Georgina Trails and Active Transportation Master Plan, though there may be some cases where trails intended for non-motorized users overlap with those intended for motorized users. Although the cases may be infrequent, adequate and proper signage related to safe interactions should be implemented.

Definitions of key considerations for the primary user groups are identified below. These should be used by the Town when designing and developing trail and AT facilities.

Primary User Groups

Pedestrians

Pedestrian users are typically those who are travelling by foot. They travel at lower speeds (with the exception of some groups e.g. joggers) than cyclists and generally require less manoeuvring space.

Pedestrians can be further defined based on the activity that they are participating in. They include:

- Walking;
- Hiking; and
- Jogging and running.

People in wheelchairs are also included in this category as they tend to operate at speeds more comparable to pedestrians than cyclists. Design considerations for the three anticipated pedestrian activities are presented in **Table D.1**.



TRAILS & AT DESIGN GUIDELINES



Table D.1 – Pedestrian Activity Design Considerations

Walking
<ul style="list-style-type: none">• Interests and Motivators: leisure, relaxation, socializing, exploring, making contact with nature, meditation, fitness, or dog walking.• Utilitarian Walkers: typically community-driven and engage in trips focusing on shopping and errands or walking to work and school. They are typically found within more urban areas and use sidewalks, parking lots and plazas as well as trails where they are convenient, well designed and properly maintained.• Facility Considerations: Trails can provide a more convenient “short cut” to traveling on sidewalks to get to a destination. Where no sidewalks are provided and there are no shoulders (in urban and/or rural areas), pedestrians should walk on the edge of the roadway, facing oncoming traffic according to the Ontario Highway Traffic Act. Signs warning motorists of pedestrians ahead are recommended in these locations.
Hiking
<ul style="list-style-type: none">• Interests and Motivators: Often considered the elite of the recreational walking group and may challenge themselves to cover long distances.• Types of Facilities & Trips: Typically engage in day trips that may range between 5 and 30 km in length and may be more keenly interested in natural features. They tend to be more adept at map reading, are more self-sufficient than leisure walkers, may expect fewer amenities and are often attracted to challenging terrain and rural areas. Trail planners should assume that there may be hikers even in remote or highway environments despite the fact that the frequency may be very low. In some cases hikers can be willing to walk on sections of rural roadway shoulder considered less safe or less interesting by the majority of leisure walkers.
Jogging / Running
<ul style="list-style-type: none">• Interests and Motivators: Typically fitness is the driving factor; however, they may share more in terms of profile characteristics with long distance hikers than they do with leisure walkers.• Types of Facilities & Trips: Typically are accomplishment oriented, enjoy trails at higher speed for distances between 3 and 15 km or more and avoid hard surfaces such as asphalt and concrete and prefer to run on granular, natural (earth) and turf surfaces as they provide more cushioning effect.

95% of all pedestrian trips are less than 2.5 km in length (Transportation Tomorrow Survey, in Hamilton Cycling Aster Plan 1996), though it is to be expected that some walkers who are out for exercise / health / fitness purposes might make trips that are between 5 and 10 km in length.



Cyclists

Cyclists include most users that are on wheels. They can travel at higher rates of speed and require more space to manoeuvre than users who are on foot. Wheeled users are also typically willing or able to travel longer distances than those on foot but are more susceptible to steep grades.

The average travel speed for a cyclist on a trail can range from 15-20 km/h and 18-30+ km/h on a road, with speeds in excess of 50 km/h while traveling downhill on roads and some hard surface trails. Where excessive speed is a potential issue on trails, speed limits and warnings should be posted to discourage fast riding and aggressive behaviour. When using roads, cyclists generally travel 0.5 – 1.0m from the curb or other obstructions because of the possibility of accumulated debris, uneven longitudinal joints, catch basins, steep cross slopes, or concern over hitting a pedal on the curb or handlebar on vertical obstacles. However, when cyclists use or cross a public roadway they are considered vehicles by law and are expected to follow the same traffic laws as motorized vehicles.

Cyclists other than young children should be discouraged from cycling on sidewalks because of potential conflicts with pedestrians and potentially dangerous intersections with intersecting public road, private driveways and entrances. Many municipalities have prohibited sidewalk cycling through local by-law, however, some municipalities permit sidewalks cycling for children learning to ride (e.g. the City of Guelph).

Cyclists can include a range of different wheeled activities including on-road cycling, mountain biking, hybrid or leisure cycling and the increasingly popular e-bicycle (please refer to **OTM Book 18** for additional details and considerations regarding designing for e-bikes). Mountain bikers are typically able to travel easily over stone dust and gravel surfaces, whereas, traditional narrow-tired touring and racing bicycles require very well compacted granular surfaces or hard surface pavements such as asphalt.

At a high level, cycling can also be defined by the type or purpose of the trip. **Table D.2** is a summary of three different trip types which cyclists could engage in.



Table D.2 – Types of Cyclists Trips

Utilitarian

Definition: Those who use cycling or walking as their day to day mode of transportation to get to and from work, school, errands, etc.

Key Consideration: Often use the streets that are part of the trail and cycling network year-round in all weather conditions as opposed to those roads which do not make up part of the formal network. In some cases they may choose to use public transit or other modes of transportation during the winter season. Typically, utilitarian users have good mobility skills and are cognisant of the “rules of the road”.

Recreational

Definition: These pedestrians and cyclists will typically use the network for fitness or leisure purposes.

Key Consideration: Trips are typically used for travel on weekends as opposed to weekdays and will consist of trips to and from destinations of cultural or natural significance including off-road recreational trails. They will typically use the secondary / local neighbourhood connections as part of the overall network.

Touring

Definition: These pedestrians and cyclists use hiking and cycling as a means of exploring areas of significant long-distances from their point of origin.

Key Consideration: Trips can vary from full day excursions to multi-day excursions. They may plan their trips in advance and are willing to spend money for accommodation and food at their destination point. In some cases they travel in groups.

Table D.3 summarizes some key design considerations for cyclists based on the type of activity and trip purposes.

Table D.3 – Key Cycling Considerations

- The mechanical efficiency of the bicycle allows users of all ages to travel greater distances at a higher rate of speed than pedestrians.
- Distances covered vary widely from a few kilometres to well over a hundred depending on the fitness level and motivation of the individual cyclist.
- Cyclists have the right to access the public roadway system, with the exception of the 400 series and major provincial highways
- Some cyclists feel unsafe sharing the road with automobiles and do not have the desire or skill level to ride in traffic.
- Some cyclists tend to prefer off-road trails, shared with pedestrians



Table D.3 – Key Cycling Considerations

as these facilities offer the less experienced and less confident cyclist a more comfortable environment.

- Cyclists that travel longer are more likely to focus a significant portion of their route on the roadway network, and often seek out quieter, scenic routes over busier roads even if the pavement quality is lower than on busier roads.

Trail and Active Transportation Guidelines

D-4:

Planning and design of the Town-wide Trails and Cycling network should be based on the primary user groups – pedestrians and cyclists. Most other modes fall under the two categories:

Secondary User Groups

Skateboarders & Non-Motorized Scooters

Skateboarding and the use of non-motorized scooters are becoming increasingly popular among all age groups, particularly in urban areas. No consistent guidelines have been widely adopted. In some municipalities, skateboarders and scooter users have been prohibited from using either roadways or sidewalks by local by-laws. Consequently, they are avid users of hard-surface off-road facilities and may travel some distance to reach a facility that suits their needs.

This user group prefers a very smooth, hard surface. Loose sand, gravel, twigs, branches, fallen leaves and puddles can be significant hazards. Though skateboarders and scooter users can quickly become pedestrians by dismounting, they too are vulnerable to the effect of grades (both up and downhill) and require ample maneuvering space. An inability to come quickly to a complete stop can be a significant concern for all but the most experienced users in this group. Long or steep hills with limited visibility may be viewed as either challenging or terrifying depending on an individual's level of experience.

All-Terrain Vehicle (ATV) & Snowmobiles

Since All-Terrain Vehicles and Snowmobiles are motorized vehicles and do not qualify as a sustainable mode of transportation, this document does not directly address their requirements in terms of on and off-road trail and AT planning and design. However, in the more rural areas of the Town of Georgina ATVs and snowmobiles have existing and planned facilities. For the purposes of the master plan it has been assumed that in some cases



TRAILS & AT DESIGN GUIDELINES



the multi-use trail facilities may be shared between pedestrians, cyclists and ATVs / snowmobiles. 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;
- Trails should be wide enough (where necessary), to allow ATVs and snowmobiles to safely pass other trail users; and
- Trails should be patrolled and monitored to ensure that trail users are acting in a safe manner with respect to each other.

Trail and Active Transportation Guidelines

D-5:	Skateboarders and in-line skaters have more specific design considerations and requirements. These should be considered when designing an on or off-road facility which accommodates a range of user groups.
D-6:	Although ATVs and snowmobiles are not sustainable modes of transportation, their requirements and interactions with users should be considered where their uses are permitted. The Town should also consider including informational messaging and signage when a range of user groups are using the same space.



Trail Designed for a Range of User Groups

Source: virginiaoutdoors.com/article/more/1533



D.3.2 Minimum Operating Dimensions

Cyclist Design Parameters

The physical dimensions and operating space of cyclists can vary due to a cyclist's bicycle type, age and ability. Cyclists require a certain amount of space to maintain stability when operating a bicycle. **Figure D.1** illustrates a cyclist's typical operating space.

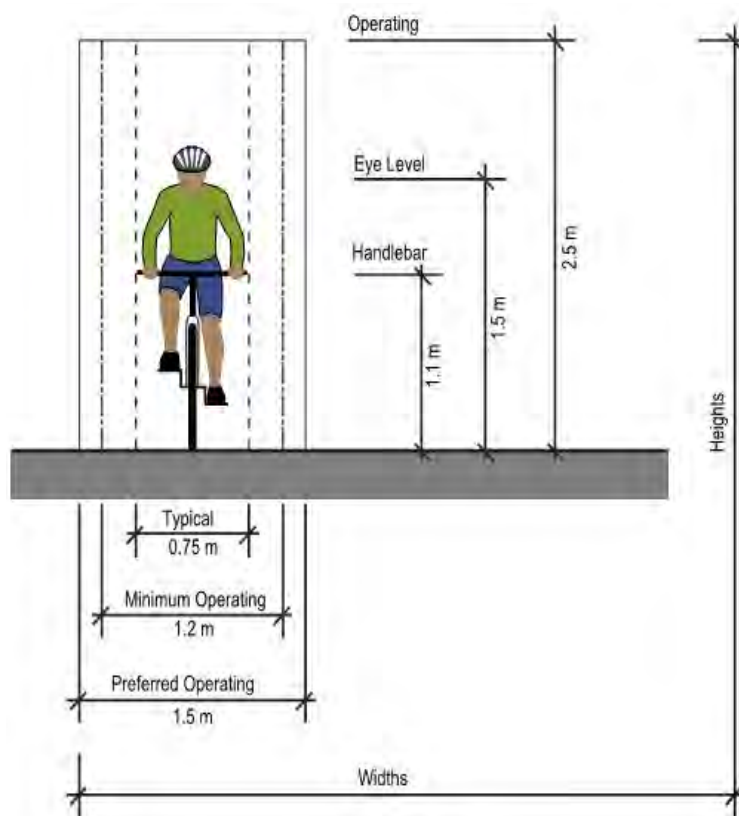


Figure D.1 – Typical Cyclist Operating Space

Source: Based on information from the AASHTO Guide for the Planning, Design and Operation of Bicycle Facilities, 2012, Updated for Ontario Traffic Manual Book 18

An operating width of 1.2 to 1.5 metres is sufficient to accommodate forward movement by most cyclists. This width is greater than the physical width momentarily occupied by a cyclist in order to accommodate natural side-to-side movement that varies with speed, wind, and cyclist proficiency. Cyclists do not travel in a straight line. Manoeuvring space is needed to allow for side-to-side movement during operation.

The operating height of 2.5 metres can generally accommodate an average adult cyclist standing upright on the pedals of a bicycle and is



consistent with the design requirements set out in Ontario Traffic Manual Book 18. However, in some cases the vertical clearance may need to be greater in order to permit the passage of maintenance and emergency vehicles if required. This should be assessed on a site-by-site basis taking into consideration context sensitive site characteristics.

The design of on and off-road trail and cycling facilities require different considerations with regard to the user's operating space. The minimum operating dimensions referenced above pertain specifically to cyclists using on-road facilities. The design parameters outlined below address typical design considerations required for the design of trail facilities.

Trail Design Parameters

Careful consideration should be given to the physical, aesthetic and environmental requirements for the different multi-use trail types. In many instances, physical design criteria related to operating space, design speed, alignment and clear zones are often governed by the needs of the fastest, most common user group on the majority of the trails. For the Town of Georgina's Trails and Active Transportation Master Plan, the user group that would fit this profile would be cyclists.

Therefore, many of the physical design criteria outlined in the following sections pertain most specifically to cycling. This is not to say that all multi-use trails need to be designed to meet the requirements for cyclists; however, when multi-use trails are being designed it is prudent to use parameters for the cyclist.

When considering single or specialty uses where part of the trail experience involves maneuvering through challenging conditions (e.g. BMX or mountain biking), the parameters outlined below may not apply. In these instances, designers should consult directly with the user group and/or design manuals that are specific for that use.

Trail user operating space is a measurement of the horizontal space that the user requires. In the case of in-line skating and cycling, the space includes room required for side to side body motion used to maintain balance and generate momentum. **Table D.4** outlines minimum and preferred operating space for different uses.



Table D.4 – Minimum and Preferred Operating Space for Trail Users

Operating Condition by Trail User Type	Minimum (metres)	Preferred (metres)
One way travel (one wheelchair user)	1.2	1.5
One way travel (two pedestrians)	1.5	2.0
One way travel (one cyclist)	1.2 (in constrained locations)	1.5+
One way travel (one in-line skater)	2.3	3.0
Two way travel (two cyclists)	3.0	3.0+
Two way travel (two wheelchair users)	3.0	3.0+

Horizontal clear distance is the space beside the trail bed that should be kept clear of protruding objects. Vertical clear distance is the space above the head of the user while using the trail (i.e. walking or mounted on their bicycle). **Table D.5** provides minimum and preferred horizontal and vertical clear distance.

Table D.5 – Horizontal and Vertical Clear Distance

Clearance Condition	Minimum (metres)	Preferred (metres)
Horizontal clearance to stationary objects	0.5	1.0
Vertical clearance to stationary objects	2.5	3.0

Slope refers to both the measured fall over a given distance and both the centerline (longitudinal slope) and perpendicular to the centerline (cross slope). Cross slope can be configured so that all runoff is directed to one side of the trail, or so that there is centre crown and runoff is shed to either side of the trail. **Table D.6** provides guidance regarding longitudinal and cross slope.



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Table D.6 – Longitudinal and Cross Slope

Longitudinal Grade or Slope	
0% to 3%	<ul style="list-style-type: none"> Preferred
5%-10%	<ul style="list-style-type: none"> Provide additional trail width where trail segments are greater than 100m in length. Introduce level rest areas every 100 to 150m of horizontal distance. Consider design strategies such as switchbacks. Install signing to alert users of upcoming steep grades. Avoid grades over 5% for off road trails. Where steeper slopes are necessary “trail hardening” should be considered. Note: 12:1 (horizontal distance or run: vertical distance or rise), or 8.3% over a distance of 9.0m is the maximum permissible slope for meeting accessibility standards. Level landings or rest areas are required as a minimum every 9.0m where the slope exceeds 8.3%.
10% to 15%	<ul style="list-style-type: none"> Consider the use of structures such as steps, step and ramp combinations, or stairways. Consider locating the trail elsewhere.
15% or over	<ul style="list-style-type: none"> Based on local experience, 15% represents the maximum possible longitudinal slope for a sustainable pathway or trail surface. Where slopes approach or exceed 15% significant washouts become an ongoing issue. Structures such as steps, step and ramp combinations and stairways should be employed. Otherwise, an alternative location for the pathway should be sought.
Cross Slope	
2%	<ul style="list-style-type: none"> Minimal, acceptable on hard surfaced trails, may not provide adequate drainage on granular surfaced trails.
2 to 4%	<ul style="list-style-type: none"> Preferred range for both hard and granular surfaced trails.
Greater than 4%	<ul style="list-style-type: none"> Avoid wherever possible as excessive cross slopes can be difficult and potentially dangerous for some levels of physical ability and certain user groups as they can result in difficulty maintaining balance, especially among user groups with a high centre of gravity.

Design speed is used to determine trail width, minimum curve radius, horizontal alignment and banking or super elevation to ensure that trail users have adequate space and time to safely approach and navigate sharper curves along the trail.



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The design speed for recreational cyclists is generally considered adequate for all self-propelled trail users including pedestrians, in-line skaters, skateboarders, scooter users and those using mobility devices such as wheelchairs. The average recreational cyclists can maintain speeds of up to 18-25 km/h on some multi-use pathways. For granular surfaced off-road multi-use pathways or trails, a design speed in the area of 25 km/h is usually adequate, whereas a design speed of 40 km/h should be considered for hard surfaced multi-use pathways and trails on steeper descents. Cautionary signing should be used to warn of upcoming steep grades and sharp curves.

Cyclists are the critical user group when designing off-road multi-use pathways and trails for self-propelled users as they have the highest average travel speed. The minimum radius of a curve on an off-road cycling facility depends on the bicycle speed and super-elevation. The AASHTO Guide for the Development of Bicycle Facilities, published in 2012 recommends that the general design speed should be 29 km/h for multi-use trails where cycling is the highest speed user group. Based on research, 29 km/h represents the 85th percentile for bicycle speed on granular surfaced pathways. The slightly lower design speed will allow for slightly smaller curve radii and potentially less construction impact as compared to multi-use pathways and trails requiring larger radii. For suggested centreline radii for a range of design speeds and super elevations please refer to **Table D.7**.

Table D.7 – Suggested Pathways and Trail Radii Based on Travel Speeds

Design speed (km/h)	Suggested Radius (m) where super elevation = 0.02m/m	Suggested Radius (m) where super elevation = 0.05m/m
25	15	14
30	24	21
35	33	30
40	47	42
45	64	57



When horizontal curves are sharp (i.e. a very small radius), facility widening should be considered to compensate for the tendency of cyclists to track toward the outside of the curve.

Table D.8 outlines additional widening requirements for curves on multi-use pathways and trails where the radii are less than the recommended minimum for the design speed selected.

Table D.8 – Additional Trail Widening on the Outside of Curve

Radius (m)	Additional widening (m)
0-7.5	1.2
7.5-15	0.9
15-22.5	0.6
22.5-30	0.3

Stopping Sight Distance is the distance required for trail users to come to a full controlled stop upon spotting an obstacle. It is a function of the user's perception and reaction time. Stopping sight distances for off-road multi-use pathways and trails are typically governed by the distance required for cyclists since pedestrians and other trail users (with the exception of in-line skaters) can typically stop more immediately than cyclists regardless of the trail configuration. In terms of in-line skaters, though no definitive data currently exists regarding stopping distance, from a number of experiences and observations from in-line skaters, representatives and manufacturers, it can be surmised that a proficient in-line skater travelling close to the same speed as a cyclist can stop in a distance equal to or less than that of a cyclist. Therefore, basing stopping distance on the distance required for a cyclist should accommodate all other expected self-propelled trail users including in-line skaters.

Trail and Active Transportation Guidelines

D-7:	The Town should refer to the minimum and preferred trail user operating space widths identified in Table D.4 when developing or reviewing multi-use pathway designs.
D-8:	The Town should refer to the minimum and preferred horizontal and vertical clear distances identified in Table D.5 when developing or reviewing multi-use pathway designs.
D-9:	The Town should refer to the longitudinal and cross slope guidelines identified in Table D.6 when developing or reviewing multi-use pathway designs.



TRAILS & AT DESIGN GUIDELINES



Trail and Active Transportation Guidelines

D-10:

The Town should consider the suggested trail curve radii and additional trail widening dimensions identified in **Table D.7** and **Table D.8** when developing or reviewing multi-use pathway designs.

D.3.3 Trails & AT Facilities in Urban, Suburban and Rural Areas

Proposed routes identified as part of the Town's Trails and AT network can be found in urban, suburban and rural areas. Typically urban / suburban users live closer to their destinations than rural users. As such, they are more likely to make short trips and / or utilitarian / commuter trips. Urban and suburban systems will generally have a higher order of infrastructure than rural systems due to a higher density of users. The application of bike lanes, signed routes, multi-use pathways in the road right-of-way should be considered for those routes found in the urban and suburban areas. Routes in rural areas may accommodate paved shoulders, fewer designated routes and some linear off-road trails (e.g. trails along or within an active or abandoned railway or a utility corridor).



Higher Order Facilities in Urban Areas; Source: www.metronews.oca – Laurier Avenue Bike Lanes (top)



Lower Order Facilities in Rural Areas; Source: www.thurdwavecyclingblog.wordpress.com



D.3.4 Freight, Transit and Emergency Service Route

Special consideration should be made for those routes that are designated as freight, transit and / or emergency service routes. The implementation of formal cycling facilities or multi-use trails within the road right-of-way on these routes should be considered to accommodate the operating and design needs of large vehicles which conflict with those of cyclists. Cyclists' level of comfort and overall safety can be compromised due to the presence of large vehicles which may require the implementation of more separated cycling facilities (e.g. bike lanes and / or multi-use pathways outside of the road right-of-way) and / or alternate / parallel routes. In these scenarios, the application of traffic calming measures may not be appropriate because of the potential disturbance that speed bumps tend to create and the turning space required for larger vehicles.

For proposed trail or AT routes identified in the network that are also part of the Region's transit system, there is the potential for increase conflict points where buses are required to merge over proposed bicycle facilities to access transit stops. In these scenarios, the applications of left-side bike lanes or other design treatments could be considered to accommodate boarding passengers and to reduce the number of conflict points between passengers and cyclists. The graphic below illustrates a design application of a designated cycling facility approaching a transit stop.



Transit Stop & Cycling Facility

Source: MMM Group, Sherbourne Cycle Tracks, 2012



D.3.5 Intersections

An intersection is where two or more roadways come together at grade. At this point different modes of transportation and associated facilities cross paths which can cause conflicts between cyclists and motorists. The draft OTM Book 18 and TAC Bikeway Control Guidelines (2012) sets out measures to decrease roadway user risk by:

- Increasing visibility for both cyclists and motorists and other roadway users (ensure cyclists and motorists can easily see each other);
- Designating and clearly marking a travel path for all roadway and intersection users including cyclists, motorists and pedestrians;
- Introducing designs that minimize the need for complex manoeuvres for cyclists;
- Managing intersection access to mitigate conflict points; and
- Facilitating awareness and understanding between competing modes of transportation.

The most frequently occurring conflicts between motorists and cyclists at an intersection can be broken into right-turn conflicts and left-turn conflicts.

- **Right-turn conflicts** - when a cyclist is trying to make a through movement while a motorist is trying to make a right turn and to do so the motorist must cross over the on-road bicycle facility.
- **Left-turn conflicts** - when cyclists try to merge across one or more lanes of through vehicle traffic in order to turn left using the same path as motorized vehicles.

Both types of conflicts can be mitigated using innovative design solutions that incorporate elements such as pavement markings and signage, pavement colour, designated holding areas for cyclists, medians, and bicycle traffic signals or by adjusting signal timings to accommodate cyclists. For additional details on these conflict areas and mitigation measures, Town staff should refer to **Draft OTM Book 18 and TAC's Bikeway Traffic Control Guidelines (2012)**.



D.3.6 Interchanges

The integration of cyclists and pedestrians at interchanges is often more complex. Interchanges possess unique characteristics and functions that present challenges when designing for pedestrians and cyclists especially when retrofitting bicycle facilities on existing interchange structures. Cycling facilities can either be implemented at an existing interchange during an upgrade or retrofitting project, or as part of a new interchange design.

Should the Town choose to retrofit any of their existing interchanges the following guidelines should be considered:

- For **lower speed merging/diverging ramps (< 70 km/h.)**, the bicycle lane should continue straight across the ramp using a white, dashed line pavement marking.
- For **high speed merging/diverging ramps (> 70 km/h.)**, the bicycle lane should not be carried straight across the ramp. Instead, it is recommended that for diverging ramps, designers either place a crossing further up the ramp with indicating signage or implement a “jughandle” crossing.

For more details on the design of these facilities, the Town should refer to the interchange and ramp crossing design treatments outlined in the **Draft OTM Book 18 and TAC’s Bikeway Traffic Control Guidelines (2012)**.

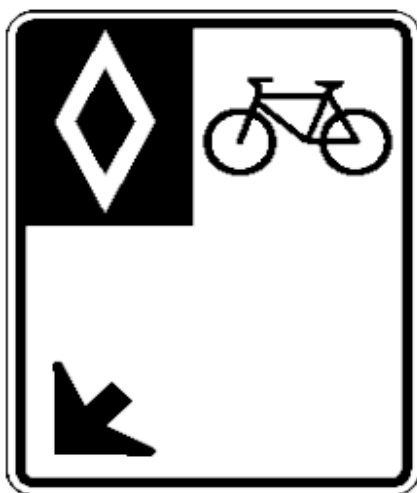
D.3.7 Transition Points

The design of walking and cycling facilities should take into consideration maximizing the consistency for users and decreasing potential conflicts with other modes of transportation. Where possible, walking and cycling facilities should be built to provide direct connections to destinations within the community, to surrounding municipalities or to key utilitarian or recreational routes. Routes that are isolated only provide short connections, do not access key destinations and/or begin and end abruptly and should not be considered for implementation unless previously identified as part of the Trails and Active Transportation Network and implementation strategy.

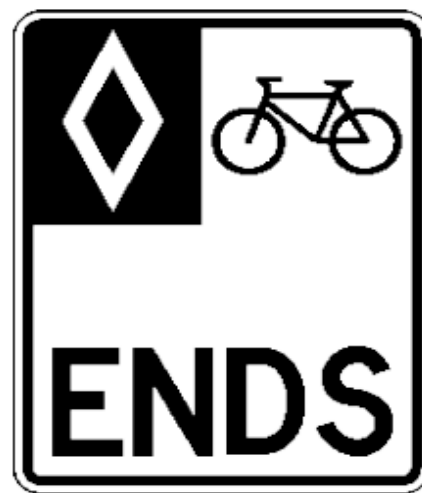


The network should be designed to provide smooth transition points between trails and active transportation facilities. Abrupt transition points make it difficult for pedestrians and cyclists to navigate through the on and off-road routes and could potentially increase the number of conflict points. The Town should design facilities to minimize these scenarios at key locations throughout the municipality.

The signage illustrated below could be implemented at transition points. When implemented, they help to increase driver, pedestrian and cyclists awareness of the presence of active transportation facilities. The Town should refer to the signage standards provided in the **TAC Bikeway Traffic Control Guidelines 2012** and the facility design guidelines as part of **OTM Book 18 (Draft)**.



RB-91



RB-92

Transition Point Signage

Source: TAC Bikeway Traffic Control Guidelines (2012)

D.3.8 Accessibility

Approximately one in eight Canadians suffer from some type of physical disability. Mobility, agility, and pain-related disabilities are by far the most common types, each accounting for approximately 10% of reported disabilities nationallyⁱ. Disability increases with age from 3.3% among children, to 9.9% among working-age adults (15 to 64), and 31.2% among seniors 65 to 74 years of age. Disability rates are highest among older seniors (75 and over), with fully 53.3% in this age group reporting a disability.



Transition Point Signage

Source: (Left) www.en.wikipedia.org ; (Right) www.americantrails.org

The **Accessibility for Ontarians with Disabilities Act (AODA)** states that “The people of Ontario support the right of persons of all ages with disabilities to enjoy equal opportunity and to participate fully in the life of the province.”ⁱⁱ The stated goal of the AODA is “to make Ontario accessible for people with disabilities by 2025.”

The **Accessibility Standards for the Built Environment** is the standard that applies to pathways and trails. The intent is that it will help remove barriers in buildings and outdoor spaces for people with disabilities. The standard will only apply to new construction and extensive renovation.

AODA Criteria which are to be considered when designing for cyclists include: operational experience, width, running slope, cross slope, total slope, surface, changes in level and signage. The guidelines and criteria set out in these documents apply to the development of trail and sidewalk facilities and are not required for consideration when designing and developing on-road cycling facilities.

When designing and implementing cycling facilities, the Town should utilize the guidelines outlined in the Built Environment Standards to ensure that the needs of all user groups are accommodated and satisfying the requirements of the AODA to the greatest extent possible, given the context of each trail’s location, the surrounding environment and type of trail experience that is desired. Sections 80.8 and 80.10 of the Accessibility Standards for the Built Environment provide the technical requirements for recreational trails. These include:

- Minimum clear width 1.0m;
- Minimum head room clearance of 2.1m above trail;
- Surfaces are to be firm, stable with minimal glare;



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- Maximum running/longitudinal slope of 10%;
- Maximum cross slope of 2%;
- High tonal or textural changes to distinguish the edge;
- Standards also address changes in level, openings in the surface, edge protection (e.g. near water); and
- Signage shall be easily understood and detectable by users of all abilities. It is important to ensure that signage and mapping/messaging clearly communicates which pathways are accessible so that users can make an informed personal decision about which pathways they will use.

Universal Trail Design is a concept that takes into consideration the abilities, needs, and interests of the widest range of possible users. For trails, it means planning and developing a range of facilities that can be experienced by a variety of users of all abilities. Principles of universal trail design can be summarized as follows:

- **Equitable use:** provide opportunity for trail users to access, share and experience the same sections of trail rather than providing separate facilities;
- **Flexibility in use:** provide different options for trail users in order to accommodate a variety of experiences and allow choice;
- **Simple, intuitive and perceptible information:** whether conveying trail information through signage, maps or a web site, communicate using simple, straightforward forms and formats with easy to understand graphics and/or text;
- **Tolerance for error:** design trails and information systems so as to minimize exposure to hazards, and indicate to users any potential risks or challenges that may be encountered;
- **Low physical effort:** trails may provide for challenge but should not exceed the abilities of the intended users; where appropriate, rest areas should be provided; and
- **Size and space for approach and use:** trails and amenities should provide for easy access, comfort and ease in their usage.

Ontario's Best Trails – (2006)ⁱⁱⁱ provides an in depth discussion of the application of Universal Design principles and their application. Where possible and practical, trails and multi-use pathways should be designed to be accessible to all levels of ability. It must be recognized, that not all trails and multi-use pathways throughout the system can meet all of the accessibility requirements.



Overcoming Barriers - Ramps for Accessible Trails and Shared-Use Pathways

Source: www.americantrails.org

Steep slopes are one of the most significant barriers for those with physical disabilities. Designing trails and multi-use pathways to be within the threshold (5%) for universal access will not only overcome this significant barrier but it will help to reduce the potential for erosion of the trail surface. The following are some additional considerations for making existing and new trails accessible:

- Designers should consult the most current standards available;
- Where the trail requires an accessibility solution that is above and beyond what is normally encountered, a representative of the local accessibility advisory committee should be consulted early on in the process to determine if it is practical and desirable to design the specific trail to be fully accessible;
- Where it has been determined that full accessibility is appropriate, the accessibility representative should be consulted during the detailed design process to ensure that the design is appropriate; and
- Work collaboratively with the local accessibility advisory committee to consider developing signage/content to clearly indicate trail accessibility conditions, which allow users with mobility-assisted devices to make an informed decision about using a particular trail prior to travelling on it.

Trail and Active Transportation Guidelines

D-11:

Every effort should be made to ensure that off-road trails meet or exceed minimum accessibility requirements. Secondary Multi-use Pathways and Internal Park Trails will be designed to meet minimum accessibility requirements where feasible and practical. Hiking / Foot Trails are typically not designed to meet accessibility requirements.



Trail and Active Transportation Guidelines

D-12:

Signage and maps should be designed to communicate which pathways and trails meet minimum accessibility requirements so that users can make their own advance decision about using the route.

D.3.9 Personal Security

To the extent that it is possible, bike and pedestrians routes should be designed to allow users to feel comfortable, safe, and secure. Although personal safety can be an issue for all, women, the elderly and children, are among the most vulnerable groups. Principles of Crime Prevention Through Environmental Design (CPTED) should be considered and applied to help address security issues concerning trail use, particularly in locations where trails are lightly used, isolated or in areas where security problems have occurred in the past. The four main underlying principles of CPTED are presented in **Table D.9**:

Table D.9 – Guiding Principles of CPTED for Trail Design





Natural Access Control	
 <p>Credit: CPTED Ontario www.cptedontario.ca</p>	Deters access to a target and creates a perception of risk to the offender.
Natural Surveillance	
 <p>Credit: CPTED Ontario www.cptedontario.ca</p>	The placement of physical features and / or activities and people that maximizes natural visibility or observation.



Table D.9 – Guiding Principles of CPTED for Trail Design

Territorial Reinforcement	
 <p>Credit: CPTED Ontario www.cptedontario.ca</p>	<p>Defines clear borders of controlled space from public to semi-private to private, so that users of an area develop a sense of ownership.</p>
Maintenance	
 <p>Credit: CPTED Ontario www.cptedontario.ca</p>	<p>Allows for the continued use of space for its intended purpose.</p>

Trail and Active Transportation Guidelines

When implementing networks, the underlying principles of CPTED should always be considered including:	
D-13:	<ul style="list-style-type: none"> • Natural Access Control; • Natural Surveillance; • Territorial Reinforcement; and • Maintenance.
D-14:	Properly located entrances, exits, fencing, landscaping and lighting should direct both foot and automobile traffic in ways that discourage crime.



D.3.10 Multi-modals Integration - "Complete Streets"

There is a growing desire to evaluate transportation services of roadways from a multimodal perspective. Given the emphasis of contemporary planning concepts such as 'Smart Growth' and 'Complete Streets', alternative modes of travel – specifically transit, cycling and walking – should be considered when exploring the development of a system of on and off-road municipal trails and active transportation routes.

There is an increasing amount of research regarding the design and development of complete streets. There is not a "one size fits all" solution or specific design standard that can be universally applied. The Toronto Centre for Active Transportation (TCAT) recently published a report documenting the benefits, challenges, best practices and design alternatives for complete streets which are being implemented world-wide. The Town of Georgina is encouraged to use this reference as a guide for future roadway design.

There are many kinds of complete streets, each are guided by the unique characteristics of the municipality in which they are being developed including but not limited to the community context and land use, the role of the street in the overall transportation network, traffic volumes of the proposed roadway and the existing transportation modes being accommodated. It is important to note that the implementation of a "complete street" approach requires coordination and support from a number of different sources including residents, businesses, planners and policy makers, engineers and landscape architects. Their combined input provides the balance of needs required to accommodate all modes of transportation including cycling while designing a useable space for all.



Credit: www.raise-the-hammer.org - Example of Complete Street Redesign in Hamilton, ON



D.4 Selecting & Designing Trail and Active Transportation Facilities

D.4.1 Facility Selection

Facility selection is an important component in network development. As planning and design of trail and active transportation (bicycle and pedestrian) facilities continues, the Town should refer to the facility selection process outlined in **OTM Book 18 Bicycle Facility Design**. The process provides a consistent framework that is easy to apply, technically based (was developed based on current research and knowledge of facility type selection), and allows flexibility to account for the differences in physical and operational characteristics from one site to another.

The selection tool does not tell designers when and when not to provide a certain facility type but rather sets out a process for selecting an appropriate facility type given the context and readily available data.

D.4.2 Trail & Active Transportation Facilities

Trail and active transportation facilities can be divided into three main categories: on-road, active transportation pathways (multi-use facilities within an active road right-of-way) and multi-use trails outside of the road right-of-way. **Table D.10** provides a description of each.

Table D.10 – General Design Categories

On-Road Facilities
<p>“On-road facility” refers to facilities within the roadway right-of-way that are located on or along an existing road and may be incorporated into the existing or future street network.</p> 

Source: MMM Group, 2012



Table D.10 – General Design Categories

Active Transportation Pathways

Active Transportation Pathways (also referred to as multi-use trail within an active road right-of-way or a boulevard multi-use trail) is a type of on-road facility that is within the roadway right-of-way but is physically separated from motor vehicle traffic where possible by a buffer.



Source: loopsframelove.blogspotit.ca, 2011

Multi-use Trail outside of an active road right-of-way

These include trails of varying width, alignment and surface type that are located through conservation areas, public open spaces, valleys and parklands, as well as linear corridors such as abandoned railway lines, unopened road allowances and utility corridors.



Source: MMM Group, 2013



On-Road Routes

One of the primary objectives of the Town's Trail and Active Transportation Master Plan is to develop a Town-wide system that is a combination of both on and off-road routes which can be used for utilitarian as well as recreational purposes. Due to land ownership restrictions and jurisdictional conflicts, it is usually easier to facilitate the development of on-road facilities as opposed to off-road facilities. For those on-road routes proposed as part of the Town's trails and active transportation network, Town staff are encouraged to use OTM Book 18 and 15 as well as the TAC Bikeway Traffic Control Guidelines (2012) as the primary reference to evaluate and confirm the most appropriate on-road facility type.

In the Town of Georgina, a number of options exist for on-road cycling facilities including signed bicycle routes, sharrows, edgelines, bike lanes and paved shoulders. However, there may be other situations where the proper design requires a more context sensitive solution. In these situations more innovative design techniques need to be employed by a design specialist who is well versed in emerging trends and best practices. Though OTM Book 18 should be the primary reference for the Town and its partners when designing and implementing on-road connections, the following provides an overview of some of the potential facility types which could be explored for implementation.



Cover of the Draft Ontario Traffic Manual Book 18 - Reference for the Design of On-Road Cycling Facilities

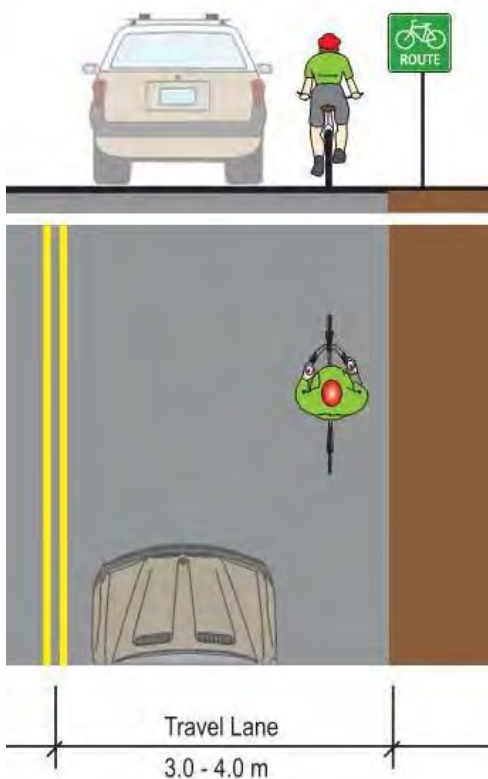
Source: MMM Group



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Signed Bicycle Route on Local Road

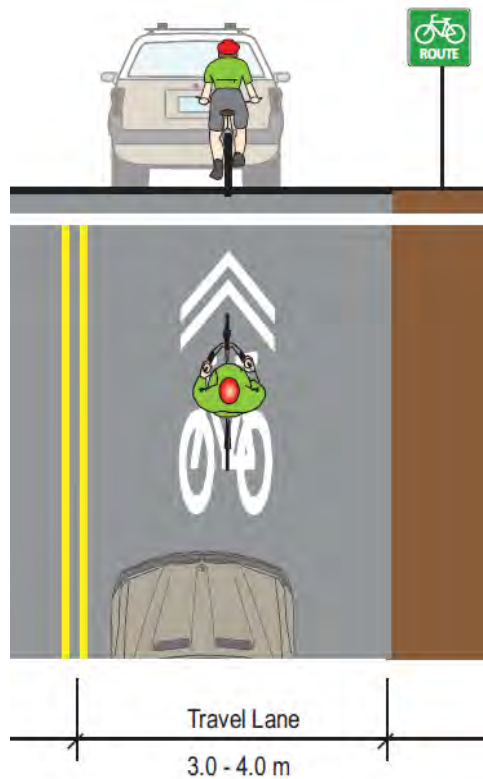


Signed-only Cycling Route

Credit: Richmond Hill, 2010

Signed-only Bike Routes are routes where both motorists and cyclists share the same vehicular travel lane and 'Bicycle Route Marker' signs are used to provide route guidance. Aside from 'Bicycle Route Marker' signs, there are generally no other provisions used for Signed-only Bike Routes. Pedestrians would be directed to use sidewalks where they exist.

Signed Bicycle Route with Optional Sharrows



Signed Route with Sharrows

Credit: pedbikeimages.org, Heather Bowden

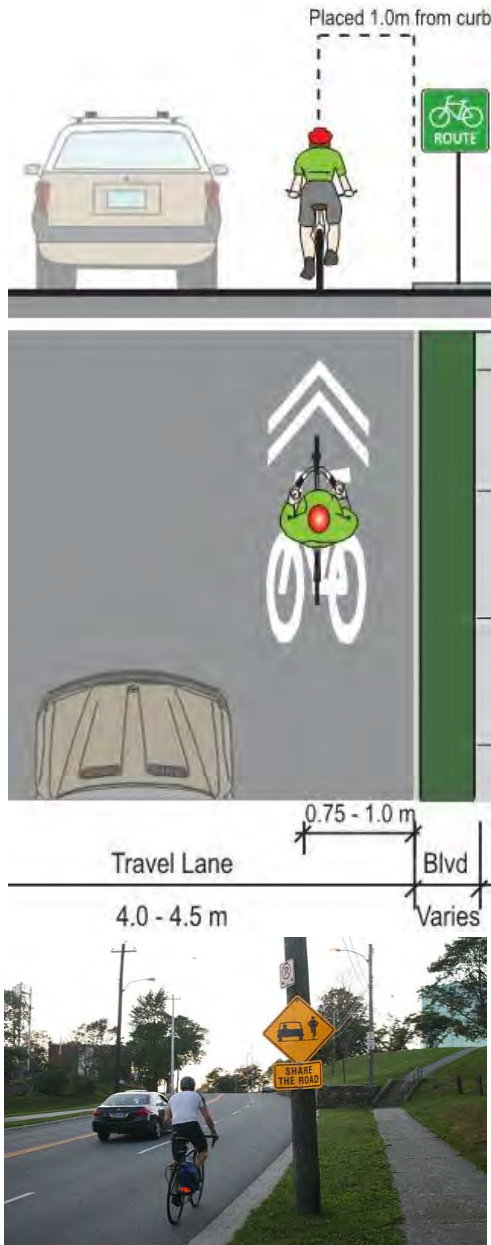
Shared use lane markings, also called "sharrows", are symbols placed on the pavement surface in the intended area of bicycle travel. Sharrows provide added route guidance and help cyclists position themselves appropriately in the travelled lane. Sharrows also increase driver awareness of the presence of cyclists and help deter unsafe passing manoeuvres by motorists.



TRAILS & AT DESIGN GUIDELINES



Signed Bicycle Route on Local Road

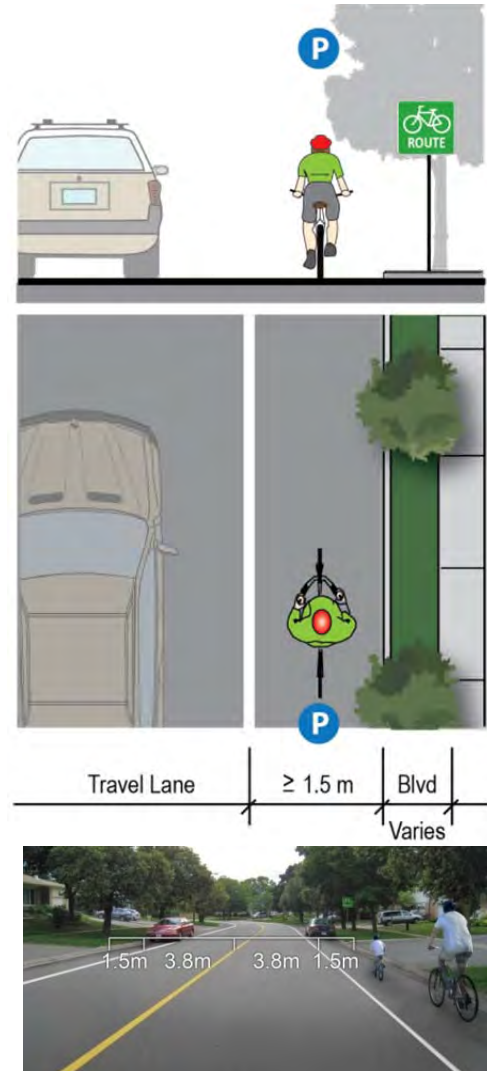


Signed Cycling Route on Wide Travelled Lane

Credit: Bridgette Schuster, 2011

Similar to Signed-only Bike Routes with the exception that the travel lane is wider than the standard motor vehicle travel lane (e.g. 4.0 to 5.0 m). Travelled lane widths should not be more than 5.0 m wide as this may encourage unsafe passing by motorists.

Urban Shoulders



An example of Retrofitting Edge Lines

Credit: MMM Group

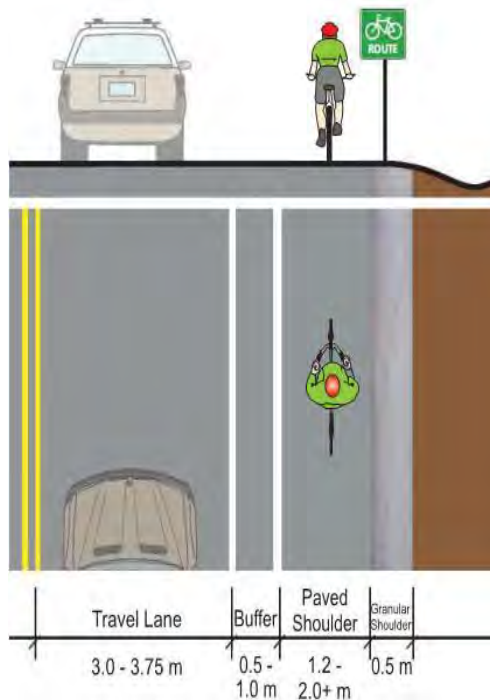
Signed-only Bike Routes may be supplemented with edge lines to create urban shoulders. Edge lines are a creative way of providing cyclists with operating space outside the motor vehicle travelled portion of the roadway without affecting on-street parking since on-street parking is still permitted. This may be a useful first step towards implementing future bicycle lanes where the removal of on-street parking is an issue.



TRAILS & AT DESIGN GUIDELINES



Signed Bike Route with Paved Shoulder



Paved Shoulder

Credit: Unknown



Buffered Paved Shoulder

Credit: Unknown

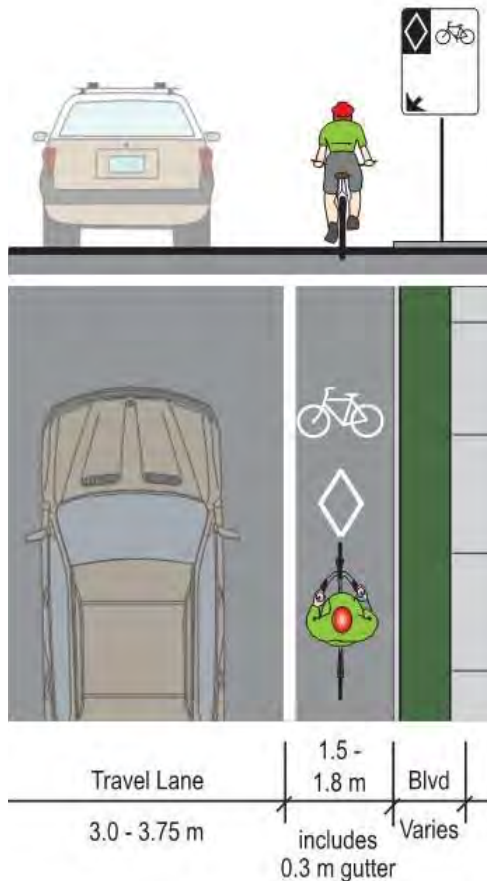
Signed Bike Routes with Paved Shoulders provide a convenient place for cyclists to ride on a road with a rural road cross section (no curbs). A buffer made up of two edge lines with or without diagonal hatching or with a rumble strip in between can be used to provide cyclists riding on the paved shoulder with added separation.



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Bicycle Lanes



Bicycle Lane, Ottawa, ON
Credit: centretown.blogspot.ca

A Bicycle Lane is a portion of a roadway which has been designated by pavement markings and signage for preferential or exclusive use by one way cyclist traffic often along the right-most curb or edge of road.

Reallocation of Space – “Road Diet”

Halton Hills Example:

4 lane collector with on-street parking permitted but low demand. Moderate to high operating speeds within a neighbourhood location (high speed was noted as an ongoing problem).



Solution #1: Halton Hills Road Retrofitting

Source: MMM Group



Solution #2: Halton Hills Road Retrofitting

Source: MMM Group



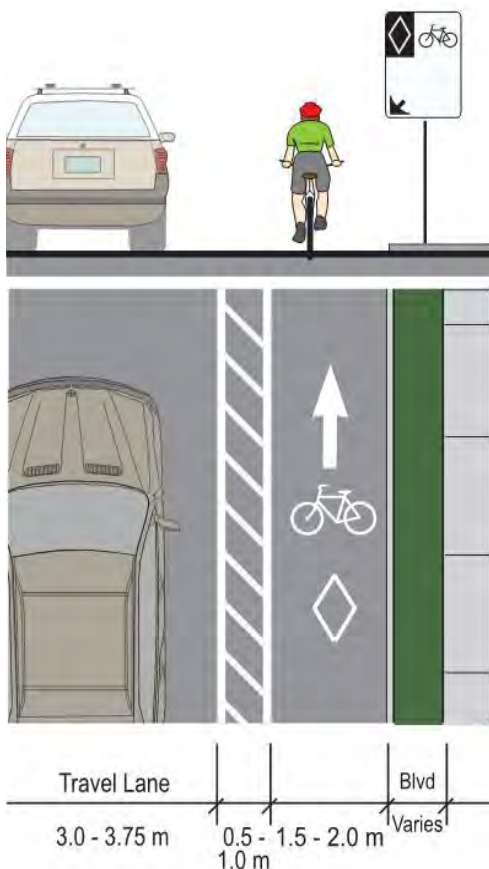
Retrofitting existing roadways without roadway widening involves the reallocation of space for the implementation of bicycle facilities.



TRAILS & AT DESIGN GUIDELINES



Separated (Buffered) Bicycle Lanes

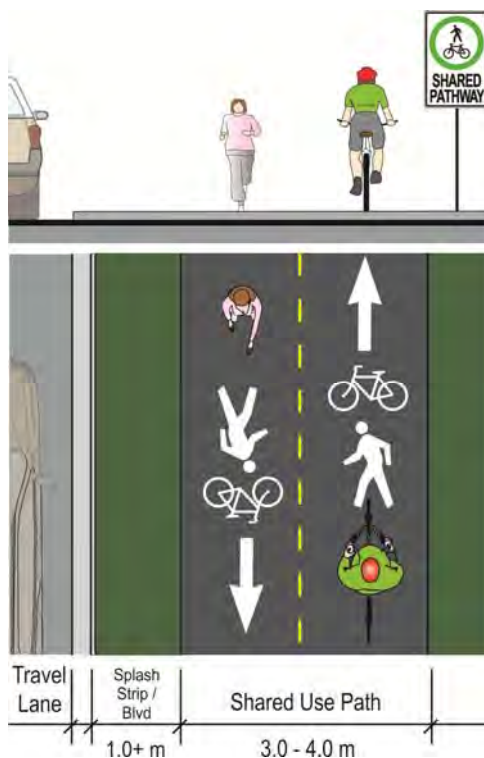


Separated Bike Lane with Planter

Credit: Vancouver, ON

Buffered Bike Lanes provide additional space/separation between the cyclist and motor vehicles and can use a number of separation alternatives to address this, including pavement markings, rumble strips, planters, etc.

Multi-use Trail within an Active Road ROW



Multi-use Pathway with a Sidewalk, Parc Lafontaine, Montreal, ON

Credit: <http://cityphil.com>

A bicycle path or a combined bicycle/pedestrian path physically separated from motor vehicle traffic by a strip of grass (often referred to as a "boulevard" or "verge") within the roadway right-of-way or in place of an existing or previously proposed sidewalk. This facility type is typically designed for a wide range of non-motorized users including pedestrians, cyclists, in-line skaters, and skateboarders.



Trail and Active Transportation Guidelines

D-15:	Signed-only Bike Routes may be used on roads where traffic volume is considered relatively low and adequate sightlines exist. Adding edge lines in urban areas may be suitable where there is sufficient width or removal of on-street parking for bike lanes is not supported by the local neighbourhood.
D-16:	Signed-only Bike Routes with sharrows may be used on congested local roads where the traffic generally moves slowly and at pinch points to make both cyclists and motorists aware of narrow zones.
D-17:	Signed-only Bike Routes on Wide Travelled Lanes may be retrofitted on 4-lane cross-sections by narrowing the inside travel lane. Supplementary 'Share the Road' signs and sharrows should be considered at pinch points to make both cyclists and motorists aware of narrow zones.
D-18:	Urban Shoulders may be considered as an option in residential areas with on-street parking where providing cyclists operating space outside the motor vehicle travelled portion of the roadway is desired but providing dedicated bicycle lanes are not feasible or appropriate given the content.
D-19:	Signed Bike Routes with Paved Shoulder should form part of the Town's trail and active transportation network in the rural area as they provide connections between communities and access to off-road destination trails (e.g. at conservation areas) .
D-20:	Bike lanes should be provided on urban arterial and major collector roads that are part of the route network where traffic volume and speed are higher. Bike lanes should also be clearly identified on roadways with bicycle symbol pavement markings and 'Reserved Bicycle Lane' signs.
D-21:	Where applicable, they should consider retrofitting existing roadways to accommodate cycling facilities including edge lines or bike lanes at a minimum width of 1.5m to the edge of the pavement or 1.8m – 2.0m wide if beside a parking lane.
D-22:	Buffered Bike lanes should be provided on urban arterial and major collector roads that are part of the route network where traffic volume and speed exceed threshold levels for the implementation of conventional Bike Lanes
D-23:	Multi-use trails (in place of sidewalks) should be considered in areas where there is high cycling demand and a large proportion of the users are youth or seniors with a low to moderate level of experience and where there are few intersection /conflict points per kilometre.



Off-Road Routes

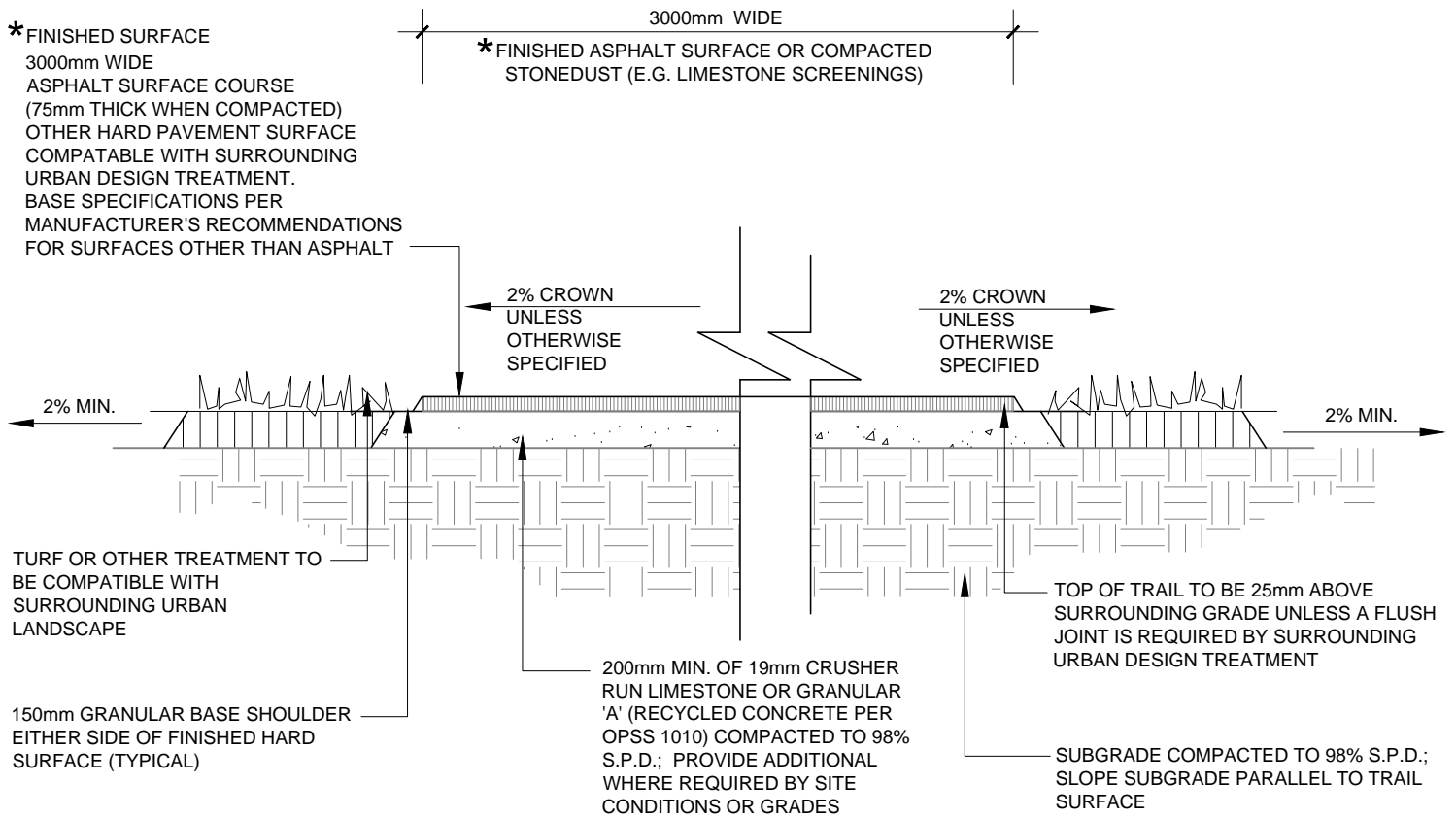
There are a range of off-road trail types which could be considered for implementation as part of the Town of Georgina's Trails network. The selection of the preferred design concept should be confirmed by Town staff based on a detailed assessment of existing characteristics and natural surroundings.

The design concepts and guidelines prepared for the Town of Georgina are intended to be used by staff as well as those responsible for the design and implementation of trail facilities throughout the Town including but not limited to the applicable conservation authorities, representatives from trails groups and organizations, the Region as well as private land owners. The following trail design concepts from D.2 – D.24 should be considered as the Town moves forward with the implementation of the master plan as well as the design and development of trail facilities.

***FINISHED SURFACE**

3000mm WIDE
 ASPHALT SURFACE COURSE
 (75mm THICK WHEN COMPACTED)
 OTHER HARD PAVEMENT SURFACE
 COMPATABLE WITH SURROUNDING
 URBAN DESIGN TREATMENT.
 BASE SPECIFICATIONS PER
 MANUFACTURER'S RECOMMENDATIONS
 FOR SURFACES OTHER THAN ASPHALT

***FINISHED ASPHALT SURFACE OR COMPACTED
 STONEDUST (E.G. LIMESTONE SCREENINGS)**



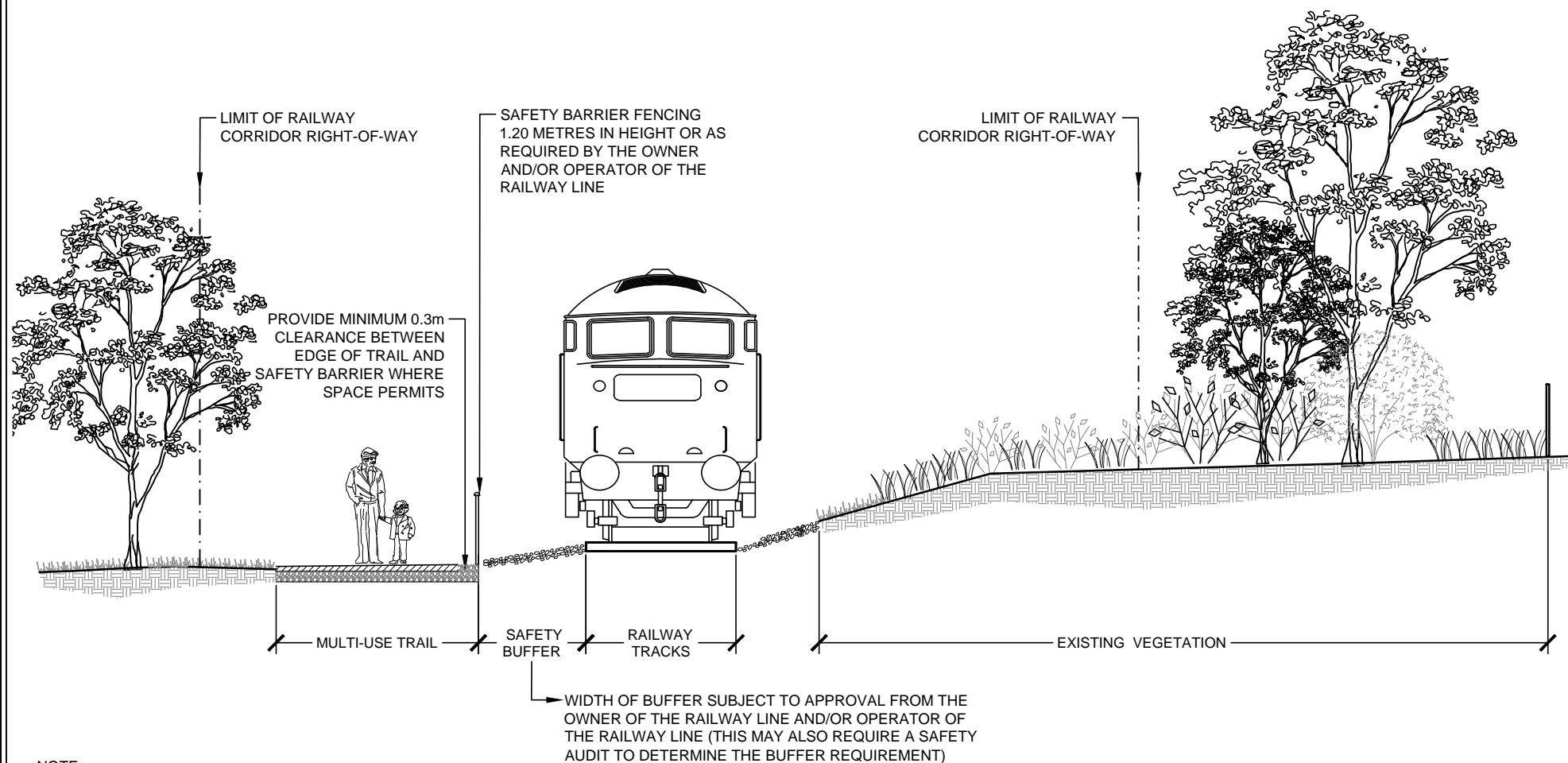
NOTE:
 THIS TRAIL CAN BE APPLIED IN A PUBLIC
 PARK OR OPEN SPACE, UTILITY
 CORRIDOR, IN OPEN ROAD ALLOWANCE
 OR ABANDONED RAILWAY LINE.

TRAIL TYPES - OUTSIDE OF AN ACTIVE ROAD RIGHT-OF-WAY

SCALE = 1:40

Figure D.2 - 3.0m WIDE TRAIL





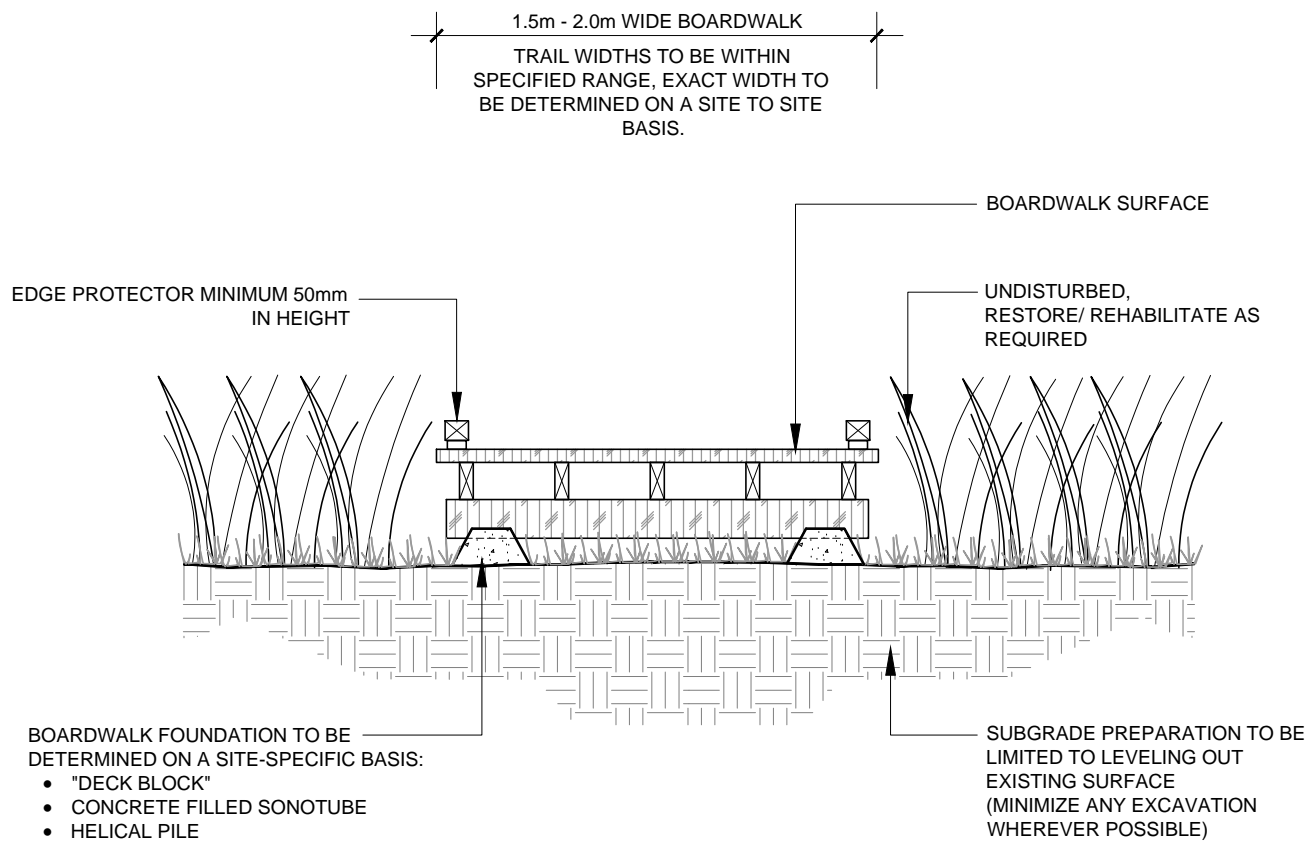
NOTE:

- RAIL WITH TRAIL PROJECTS REQUIRE APPROVAL FROM THE OWNER AND/OR OPERATOR OF THE RAILWAY LINE.
- CROSSINGS OF ACTIVE RAILWAY LINES ARE ALSO SUBJECT TO APPROVAL FROM TRANSPORT CANADA.

Figure D.3 - TRAIL TYPES

SCALE = 1:40

ACTIVE RAIL WITH TRAIL "RAILS WITH TRAILS"



NOTE:

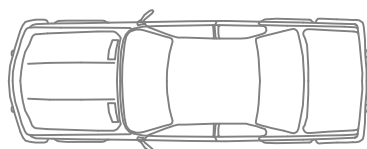
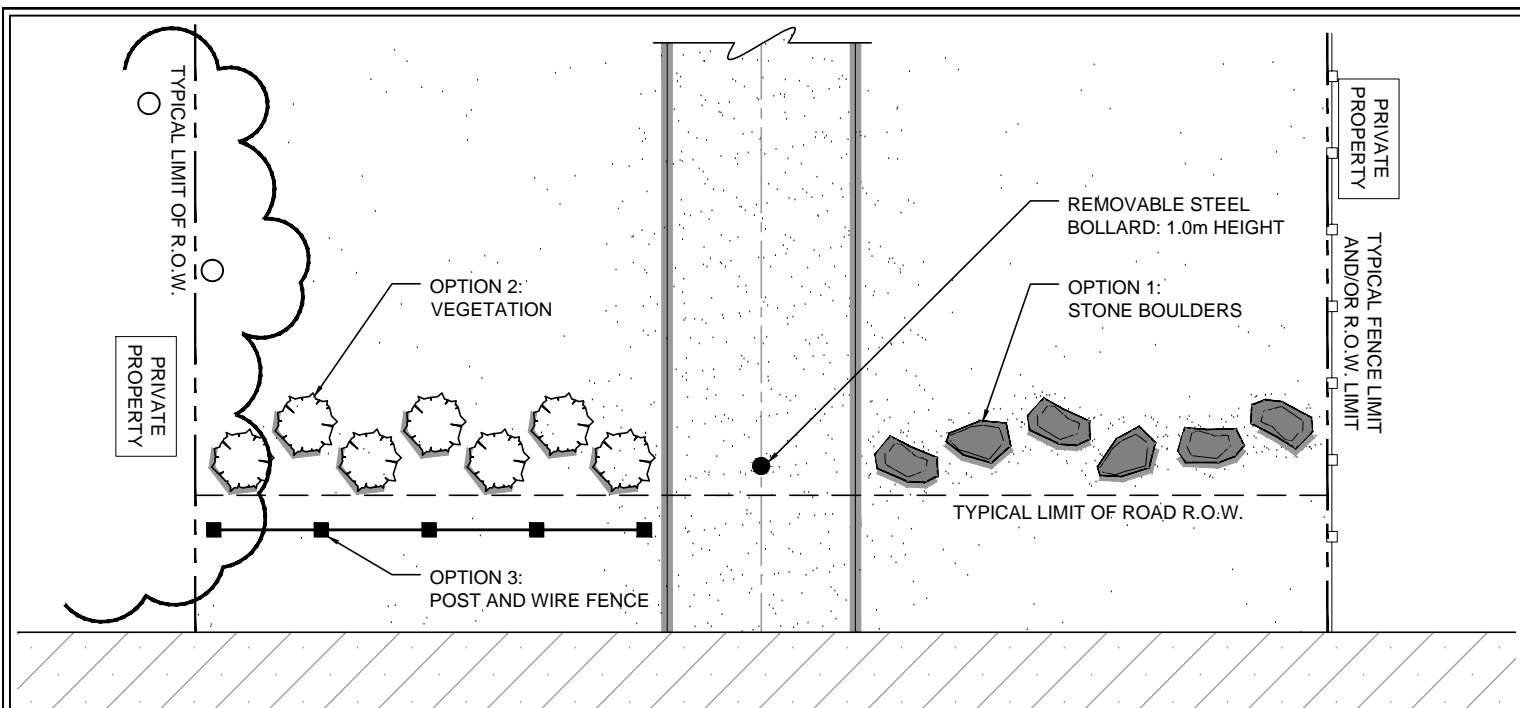
- BOARDWALK HEIGHT SHOULD BE CONSIDERED WHEN DESIGNING SHOULD A RAILING NOT BE DESIRED.
- DEPENDING ON THE LOCATION, A SEDIMENT CONTROL BARRIER MAY BE REQUIRED TO DEFINE LIMITS OF WORK AND PREVENT MIGRATION OF MATERIALS INTO SURROUNDING AREA.

TRAIL TYPES - OUTSIDE OF AN ACTIVE ROAD RIGHT-OF-WAY

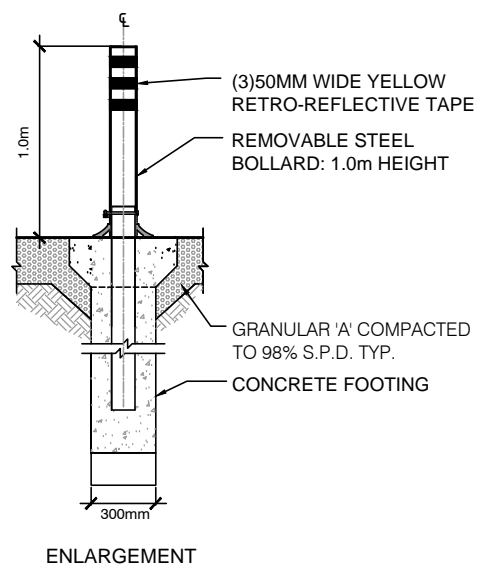
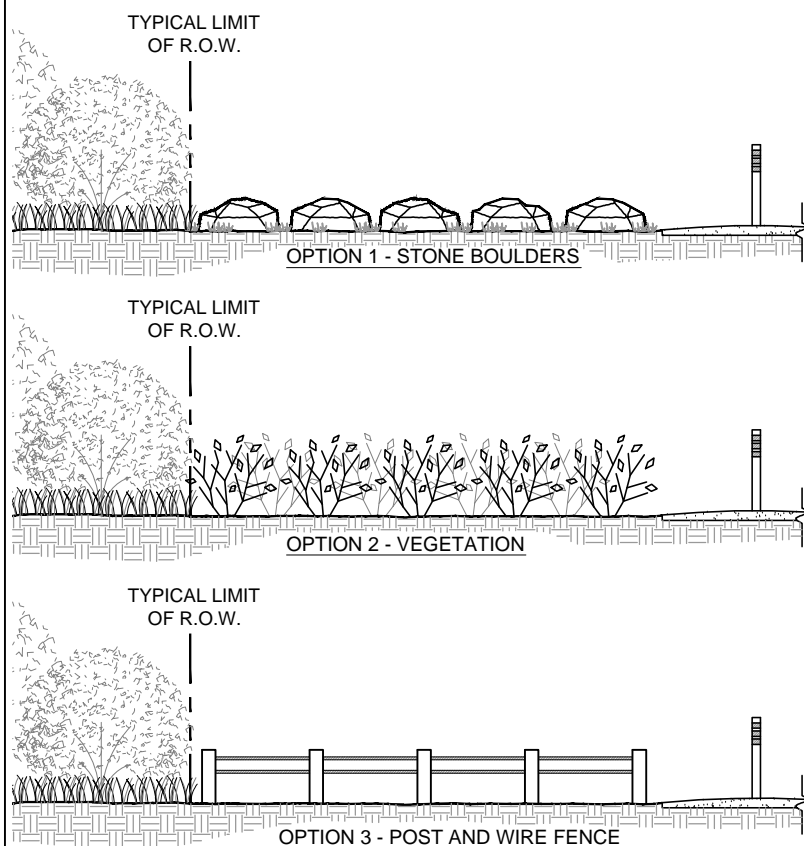
SCALE = 1:40

Figure D.4 - BOARDWALK





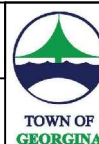
TYPICAL TRAIL ACCESS WITH REMOVABLE BOLLARD - PLAN VIEW

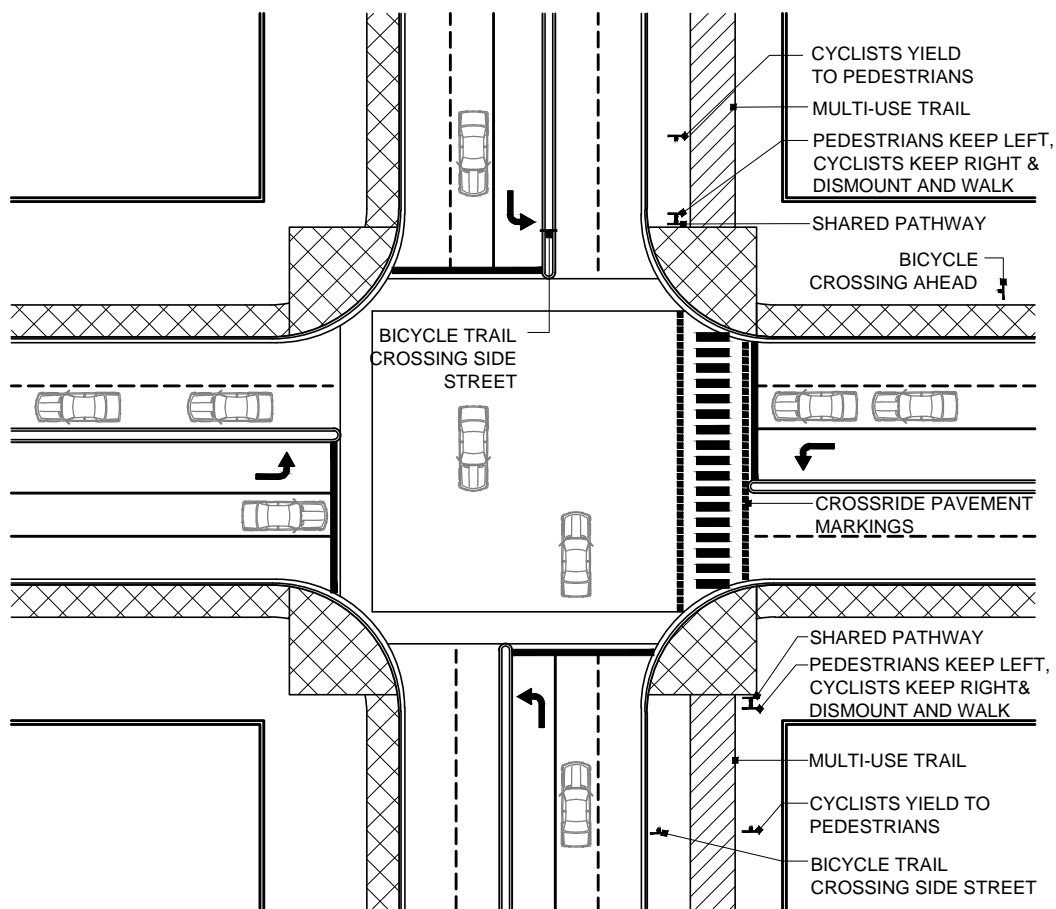


TRAIL ACCESS

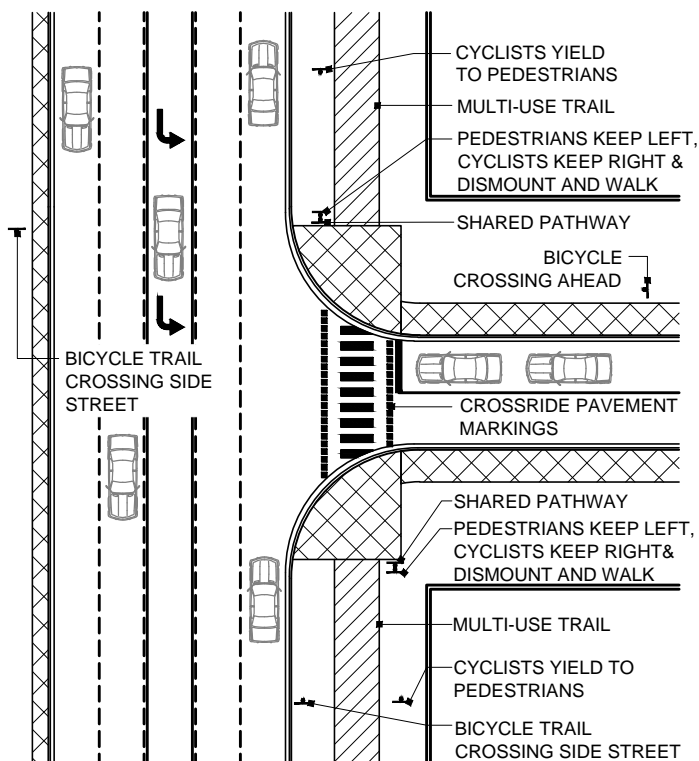
SCALE = NTS

Figure D.5 - REMOVABLE STEEL BOLLARD

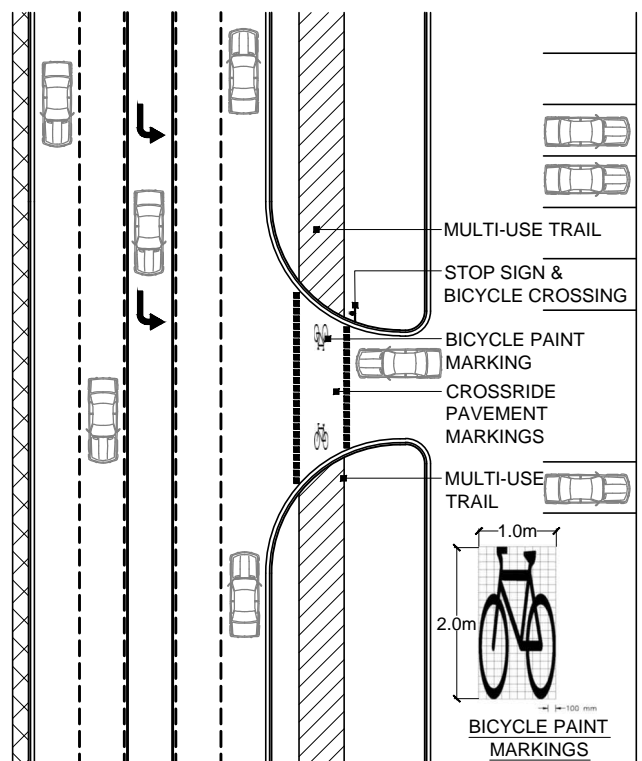




SIGNALIZED INTERSECTION WITH CROSSRIDE



UNSIGNALIZED INTERSECTION WITH CROSSRIDE

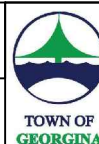


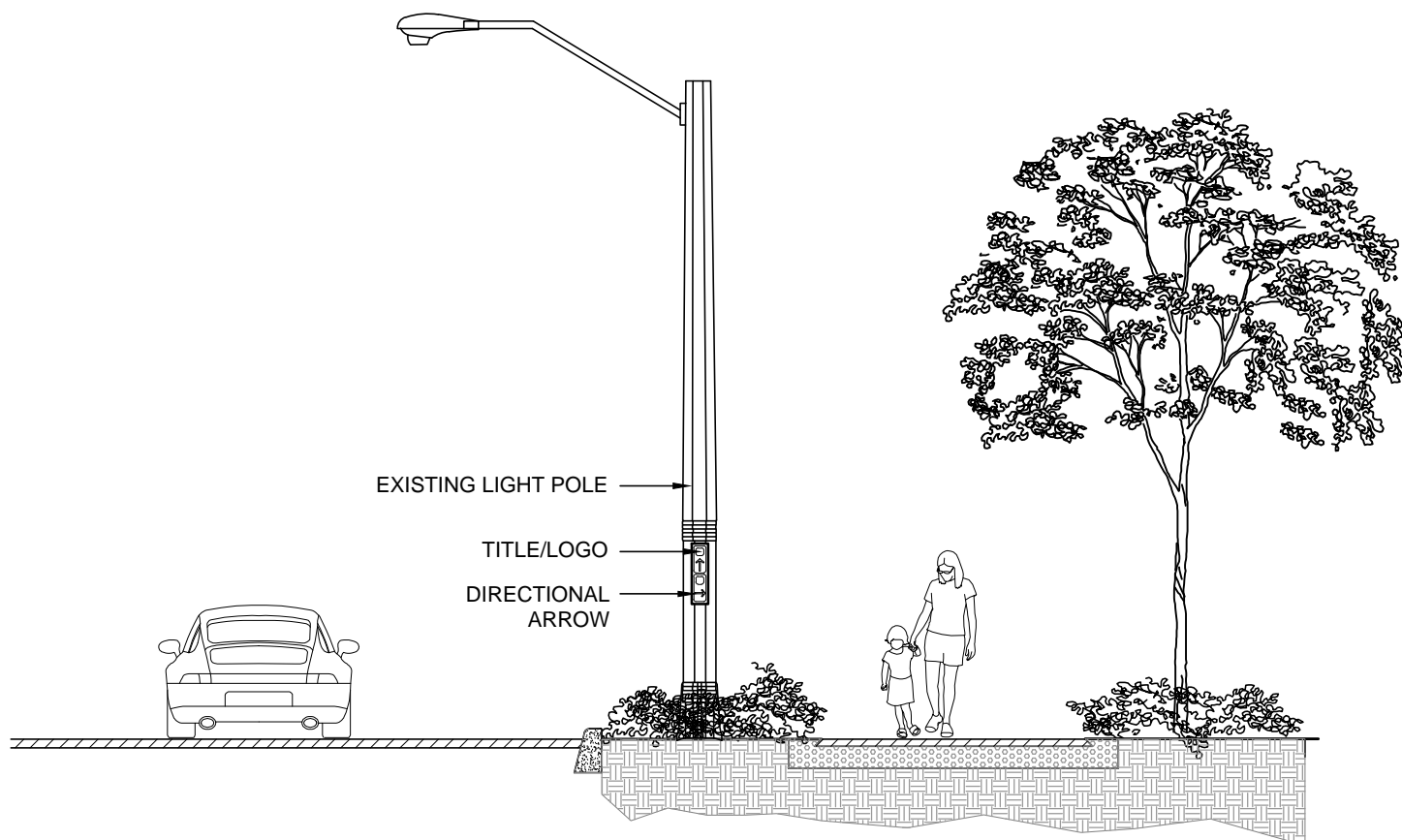
COMMERCIAL DRIVEWAY CROSSING WITH CROSSRIDE

ROAD CROSSINGS

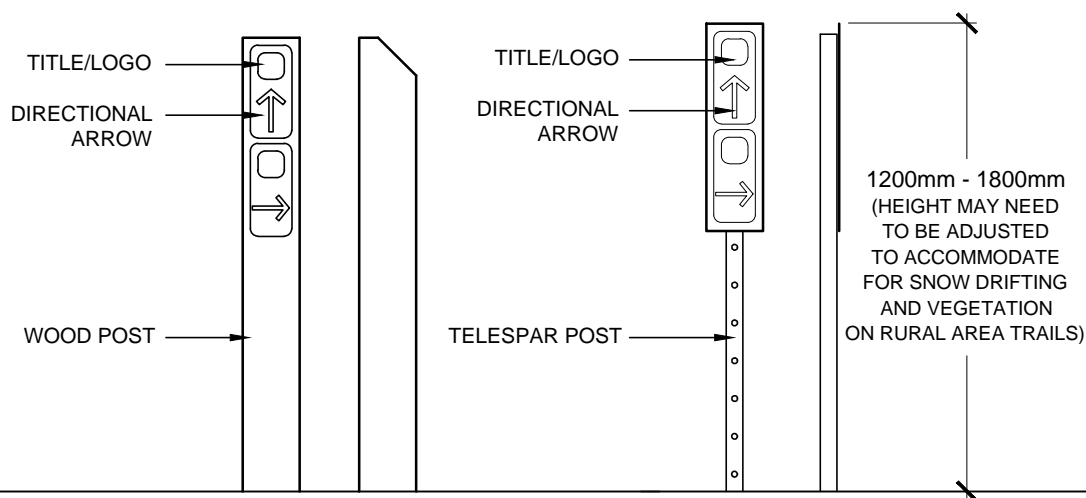
SCALE = NTS

Figure D.6 - CROSSRIDES





URBAN AREA - DIRECTIONAL SIGNAGE PLACED ON EXISTING LIGHT POLE



FUNCTION:

- ROUTE MARKER: PROVIDES A SIMPLE VISUAL MESSAGE TO TRAIL USERS THAT THEY ARE ON THE DESIGNATED ROUTE.
- DIRECTIONAL SIGN: USED TO CUE TRAIL USERS FOR GIVEN DESTINATIONS ALONG THE TRAIL AND DISTANCES TO GIVEN DESTINATIONS.

TYPICAL LOCATION:

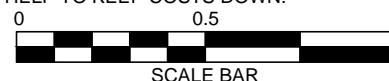
- TYPICALLY LOCATED AT TRAIL INTERSECTIONS.
- ALSO PLACED AT REGULAR INTERVALS ALONG LONG, UNINTERRUPTED SECTIONS OF TRAIL, PARTICULARLY IN RURAL AREAS.

SIGN STRUCTURE:

- WITHIN URBAN AREAS, STRUCTURE CAN BE MADE OF COLOURED METAL FOR A MORE FORMAL LOOK.
- WITHIN RURAL AREAS, STRUCTURE CAN BE MADE OF WOOD FOR A MORE NATURAL LOOK.

OTHER NOTES:

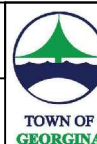
- CONSIDER A COUPLE OF DIFFERENT SIGN STYLES THAT RELATE TO THE LOCATION. (I.E. HIGHER END STYLE FOR URBAN AREAS AND A SIMPLER STYLE FOR RURAL AREAS).
- DIFFERENT SIGN STYLES HELP TO KEEP COSTS DOWN.

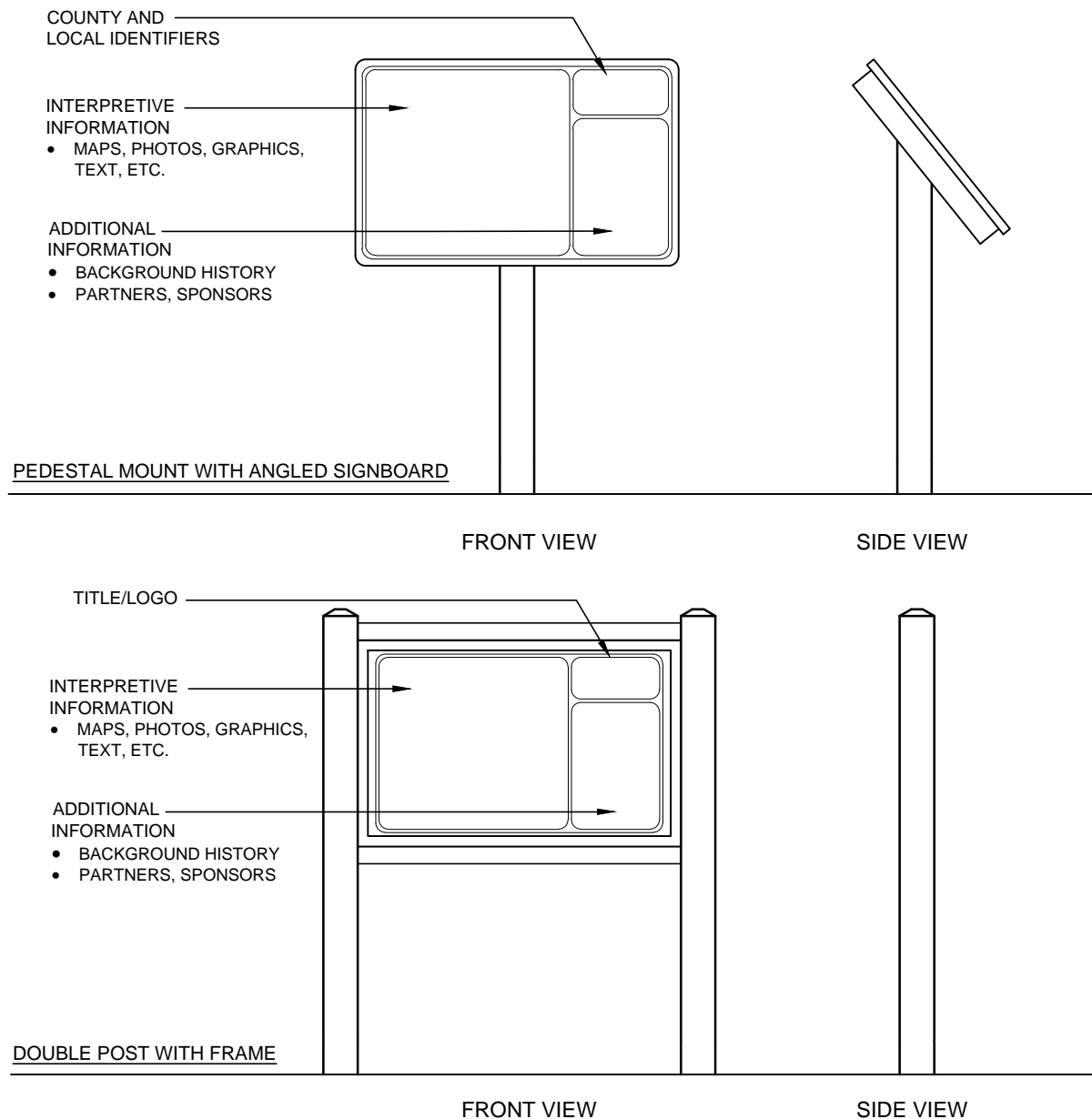


SIGNAGE

SCALE = 1:20

Figure D.7 - DIRECTIONAL SIGN





FUNCTION:

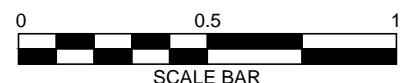
- PROVIDES TRAIL USERS WITH INFORMATION ABOUT A KEY TRAIL FEATURE WHICH MAY BE CULTURAL, HISTORICAL OR NATURAL.
- INTERPRETIVE SIGNS SHOULD BE HIGHLY GRAPHIC AND EASY TO READ.
- SIGNS CAN INCLUDE A SIGNIFICANT AMOUNT OF INFORMATION AND DETAIL WHERE APPROPRIATE.
- OFFER THE POTENTIAL TO PARTNER WITH LOCAL GROUPS FOR THE DEVELOPMENT OF TEXT AND GRAPHICS.

TYPICAL LOCATION:

- TYPICALLY LOCATED AT KEY TRAIL FEATURES WHICH HAVE PARTICULAR INTEREST.
- SHOULD BE PLACED IN A HIGHLY VISIBLE OR HIGH TRAFFIC LOCATION TO DISCOURAGE VANDALISM.
- WHERE THE SIGN IS INTERPRETING A SENSITIVE ENVIRONMENT OR RARE SPECIES, LOCATE THE SIGN AWAY FROM THE ACTUAL LOCATION TO AVOID POTENTIAL DAMAGE TO THE FEATURE.

SIGN STRUCTURE:

- WITHIN URBAN AREAS, STRUCTURE CAN BE MADE OF COLOURED METAL FOR A MORE FORMAL LOOK.
- WITHIN RURAL AREAS, STRUCTURE CAN BE MADE OF WOOD FOR A MORE NATURAL LOOK.

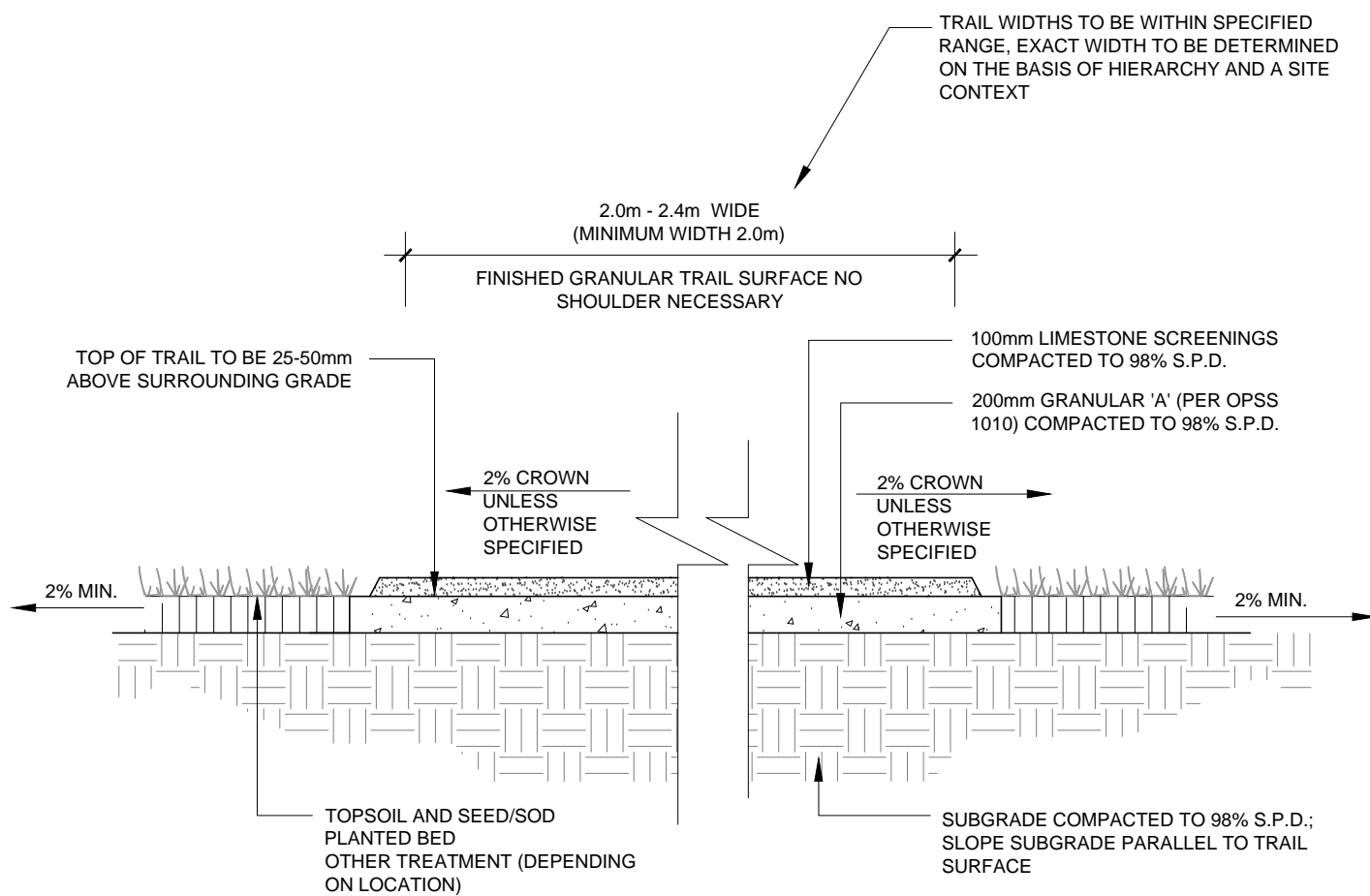


SIGNAGE

SCALE = 1:20

Figure D.8 - INTERPRETIVE SIGN





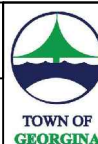
NOTE:

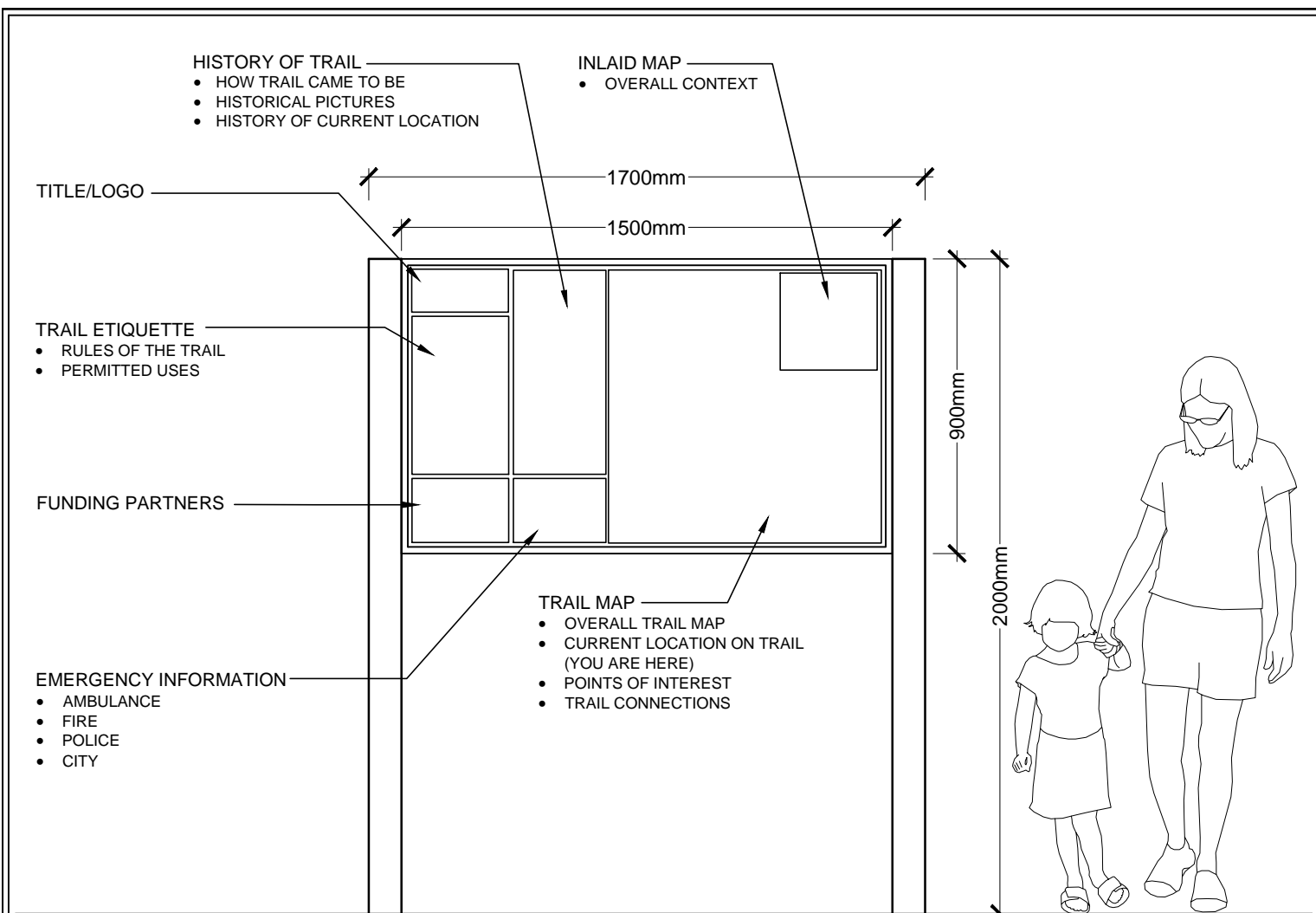
- THIS TRAIL CAN BE APPLIED IN A PUBLIC PARK OR OPEN SPACE, UTILITY CORRIDOR, IN OPEN ROAD ALLOWANCE OR ABANDONED RAILWAY LINE.
- WHERE CYCLING IS AN INTENDED USE, TRAIL SHOULD BE 2.4m TO ACCOMMODATE 2-WAY TRAVEL.

TRAIL TYPES - OUTSIDE OF AN ACTIVE ROAD RIGHT-OF-WAY

SCALE = 1:40

Figure D.9 - 2.0m - 2.4m WIDE LIMESTONE TRAIL





FUNCTION:

- PROVIDES ORIENTATION TO OVERALL TRAIL SYSTEM BY WAY OF MAPPING AND INTERPRETIVE INFORMATION.
- CAN ALSO PROVIDE THE HISTORY BEHIND THE TRAIL OR REGION.
- LISTS THE PERMITTED USES OF THE TRAIL AND EMERGENCY CONTACT INFORMATION.
- THE MAJOR TRAILHEAD SIGN IS LARGER IN SIZE AND CAN ALSO ACT AS AN IDENTIFIER TO PASSING PEDESTRIANS AND VEHICLES.

QR CODES:

- QUICK RESPONSE CODES CAN BE SCANNED BY MOBILE PHONE DEVICES THAT WILL PROVIDE INSTANT ACCESS TO A DESIGNATED WEBSITE. WEBSITES CAN BE EASILY MODIFIED SO THAT INFORMATION (MAPPING, EVENTS, PROGRAMS, ETC.) ARE CURRENT.

TYPICAL LOCATION:

- TYPICALLY LOCATED AT STAGING AREAS.
- IN CASES WHERE IT IS ASSOCIATED WITH A PARKING AREA THE TRAILHEAD SIGN IS USUALLY IN THE TRANSITION AREA BETWEEN THE PARKING LOT AND TRAIL.

TYPICAL SIGN ELEMENTS:

- TRAIL ETIQUETTE DENOTING GUIDELINES FOR TRAIL USERS
- EMERGENCY CONTACT INFORMATION (IE. 911 OR MAINTENANCE ISSUES)
- IMAGERY OF DESTINATION POINTS ALONG TRAIL
- LOGOS FROM TOWN/MUNICIPALITY, COUNTY AND SPONSORSHIPS
- TRAIL MAP INDICATING LENGTH, DESTINATION POINTS AND OVERALL TRAIL LAYOUT
- PERMITTED USES (I.E. BICYCLES, EQUESTRIANS, ETC.)

OTHER NOTES:

- MAY OR MAY NOT HAVE A ROOF STRUCTURE.
- OFTEN A CUSTOM DESIGNED STRUCTURE, ALTHOUGH THERE ARE SOME PRE-MANUFACTURED STRUCTURES ON THE MARKET.
- WITHIN URBAN AREAS, STRUCTURE CAN BE MADE OF COLOURED METAL FOR A MORE FORMAL LOOK.
- WITHIN RURAL AREAS, STRUCTURE CAN BE MADE OF WOOD FOR A MORE NATURAL LOOK.
- WHEN SELECTING TEXT FOR SIGNAGE, IT IS SUGGESTED TO CHOOSE A SANS SERIF FONT. SERIF FONTS CAN MAKE IT DIFFICULT FOR THOSE WITH VISUAL IMPAIRMENTS TO READ THE LETTERING AS THE TEXT TENDS TO BLEND TOGETHER.
- HIGH CONTRAST BETWEEN BACKGROUND AND TEXT FOR EASY READABILITY. A MINIMUM LIGHT REFLECTIVE VALUE OF 70% IS RECOMMENDED TO MEET AODA REQUIREMENTS.

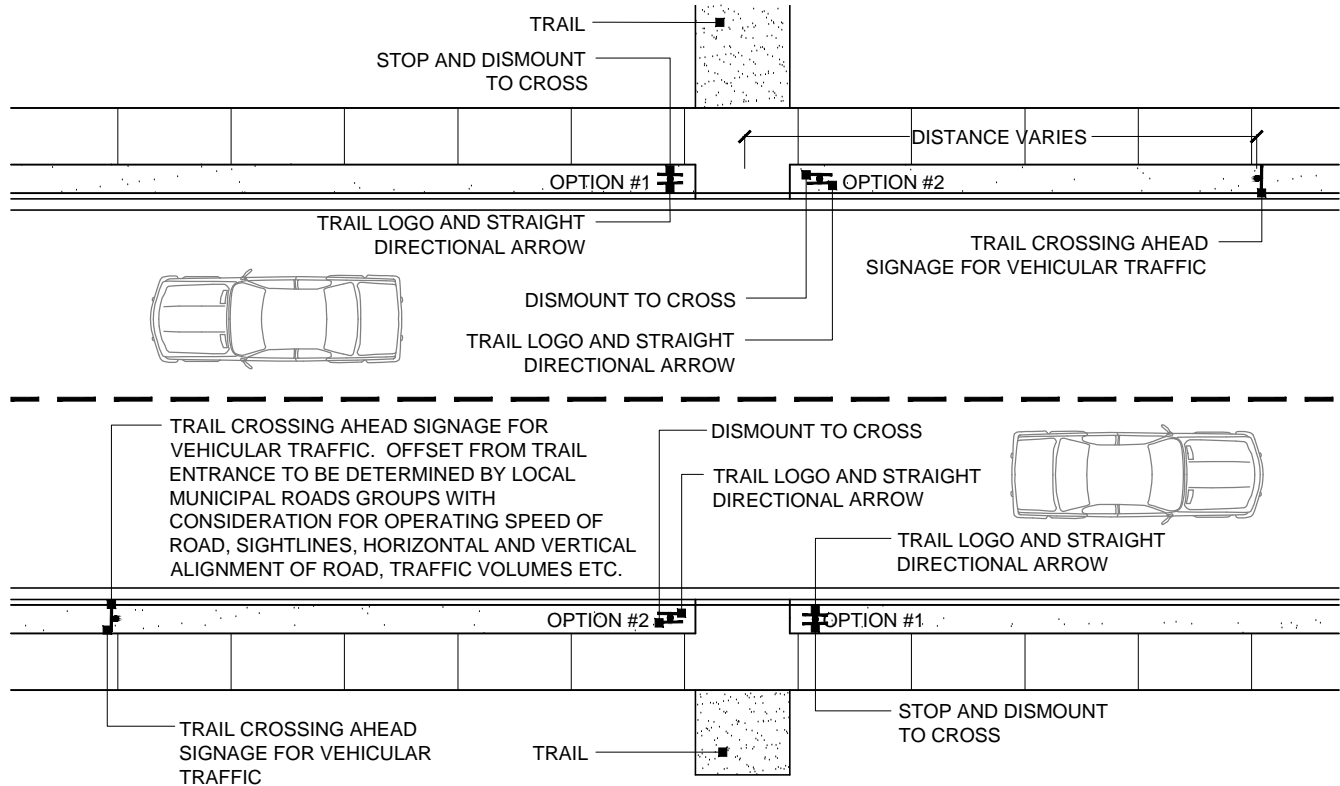


SIGNAGE

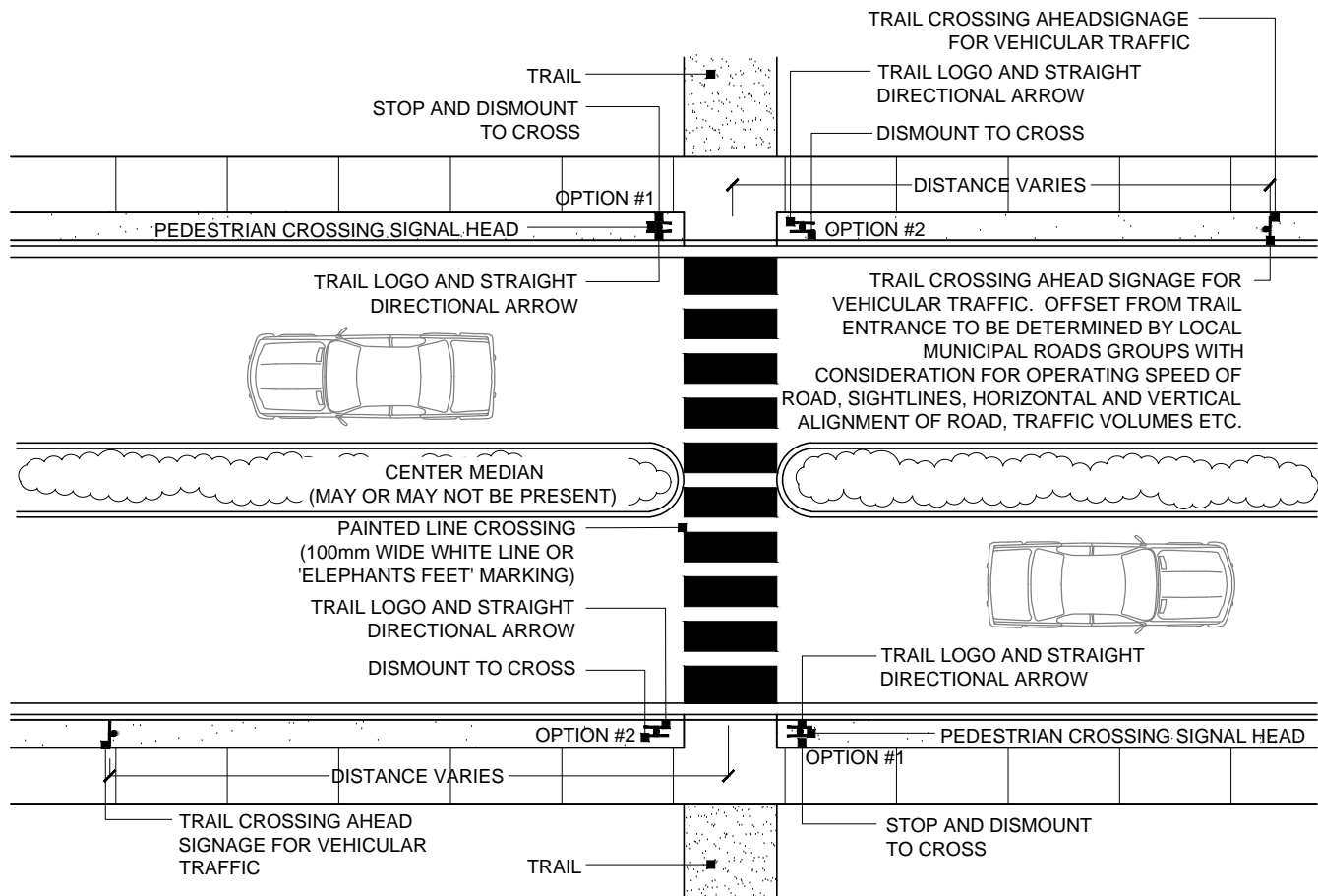
SCALE = 1:20

Figure D.10 - MAJOR TRAILHEAD SIGN





UNSIGNALIZED MID-BLOCK CROSSING



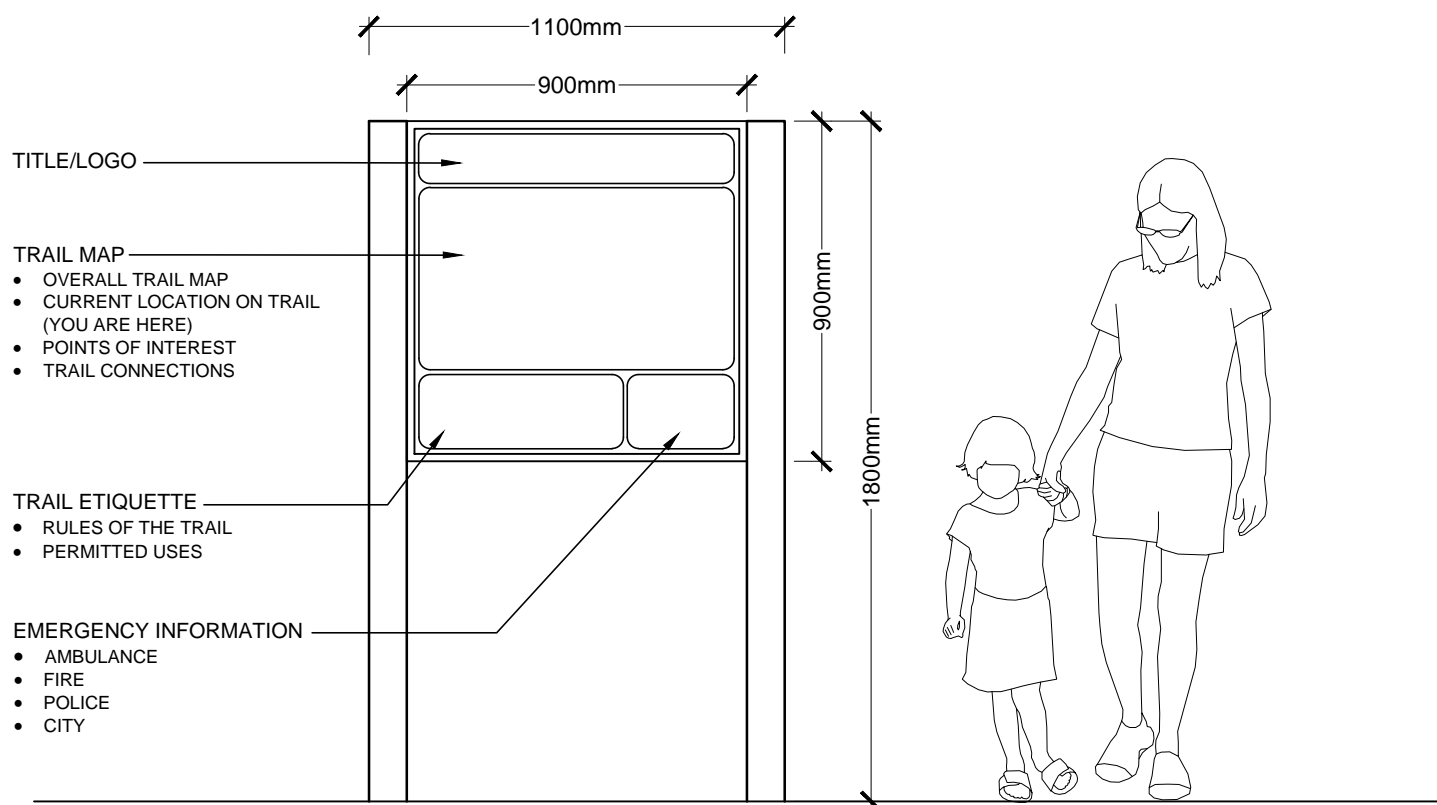
SIGNALIZED MID-BLOCK CROSSING

ROAD CROSSINGS

SCALE = NTS

Figure D.11 - SIGNALIZED AND UNSIGNALIZED MID-BLOCK CROSSING





FUNCTION:

- SMALLER THAN A MAJOR TRAILHEAD SIGN.
- THIS SIGN PROVIDES USERS WITH THEIR CURRENT LOCATION, INTERPRETIVE INFORMATION.
- LISTS THE PERMITTED USES OF THE TRAIL AND EMERGENCY CONTACT INFORMATION.

QR CODES:

- QUICK RESPONSE CODES CAN BE SCANNED BY MOBILE PHONE DEVICES THAT WILL PROVIDE INSTANT ACCESS TO A DESIGNATED WEBSITE. WEBSITES CAN BE EASILY MODIFIED SO THAT INFORMATION (MAPPING, EVENTS, PROGRAMS, ETC.) ARE CURRENT.

TYPICAL LOCATION:

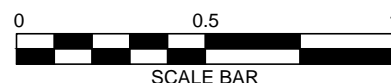
- TYPICALLY LOCATED AT MAJOR JUNCTIONS ALONG THE TRAIL AND MINOR STAGING AREAS.

OTHER NOTES:

- FRAMES CAN BE CUSTOM DESIGNED OR PRE-MANUFACTURED.
- WITHIN URBAN AREAS, STRUCTURE CAN BE MADE OF COLOURED METAL FOR A MORE FORMAL LOOK.
- WITHIN RURAL AREAS, STRUCTURE CAN BE MADE OF WOOD FOR A MORE NATURAL LOOK.
- WHEN SELECTING TEXT FOR SIGNAGE, IT IS SUGGESTED TO CHOOSE A SANS SERIF FONT. SERIF FONTS CAN MAKE IT DIFFICULT FOR THOSE WITH VISUAL IMPAIRMENTS TO READ THE LETTERING AS THE TEXT TENDS TO BLEND TOGETHER.
- HIGH CONTRAST BETWEEN BACKGROUND AND TEXT FOR EASY READABILITY. A MINIMUM LIGHT REFLECTIVE VALUE OF 70% IS RECOMMENDED TO MEET AODA REQUIREMENTS.

TYPICAL SIGN ELEMENTS:

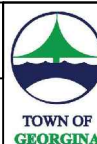
- TRAIL ETIQUETTE DENOTING GUIDELINES FOR TRAIL USERS
- EMERGENCY CONTACT INFORMATION (IE. 911 OR MAINTENANCE ISSUES)
- IMAGERY OF DESTINATION POINTS ALONG TRAIL
- LOGOS FROM TOWN/MUNICIPALITY, COUNTY AND SPONSORSHIPS
- TRAIL MAP INDICATING LENGTH, DESTINATION POINTS AND OVERALL TRAIL LAYOUT
- PERMITTED USES (I.E. BICYCLES, EQUESTRIANS, ETC.)

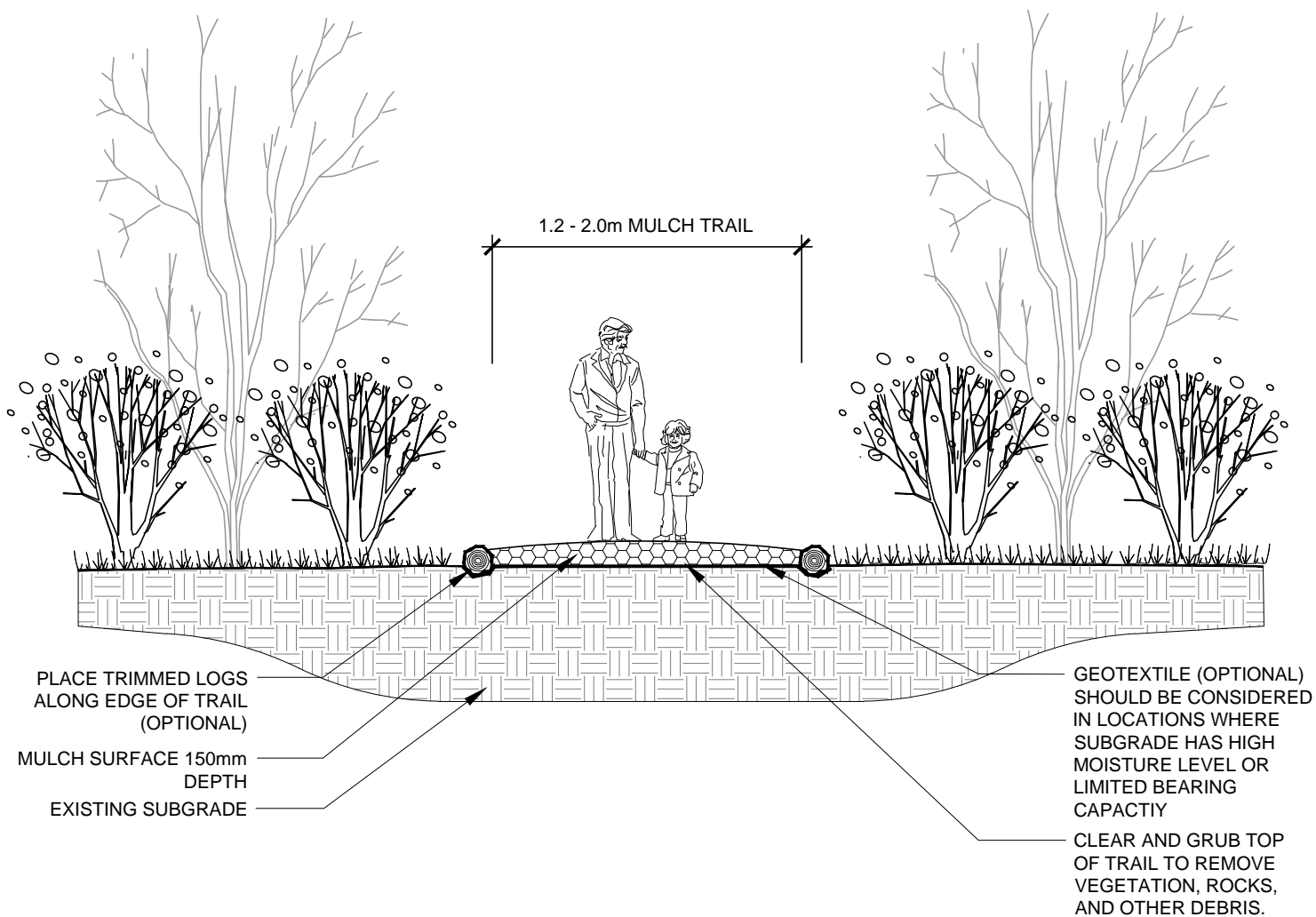


SIGNAGE

SCALE = 1:20

Figure D.12 - MINOR TRAILHEAD SIGN



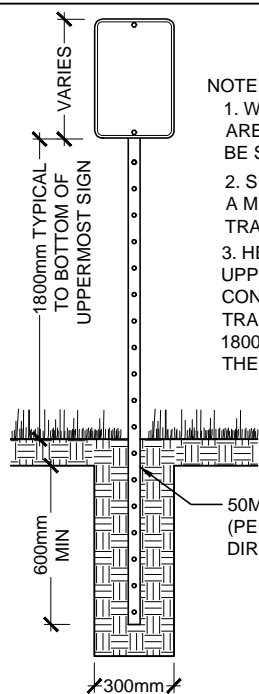


TRAIL TYPES

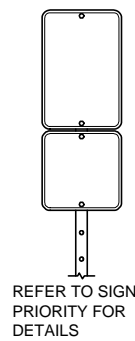
SCALE = 1:50

Figure D.13 - MULCH TRAIL IN A NATURAL SETTING



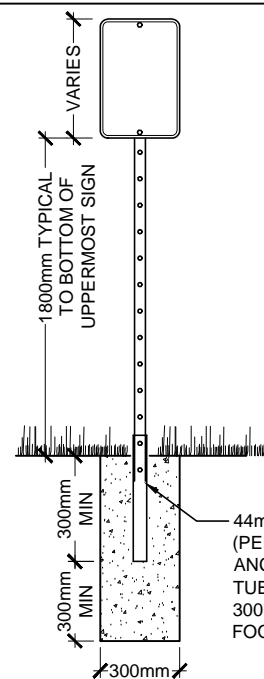


- NOTE:
1. WHERE 2 OR MORE SIGNS ARE LOCATED, SIGNS SHALL BE STACKED VERTICALLY.
 2. SIGNS SHALL BE PLACED A MINIMUM OF 0.6m OFF OF TRAIL EDGE
 3. HEIGHT TO BOTTOM OF UPPERMOST SIGN TO BE CONSISTENT THROUGHOUT TRAIL. TYPICAL HEIGHT OF 1800mm IS RELATIVE TO THE TRAIL SURFACE.



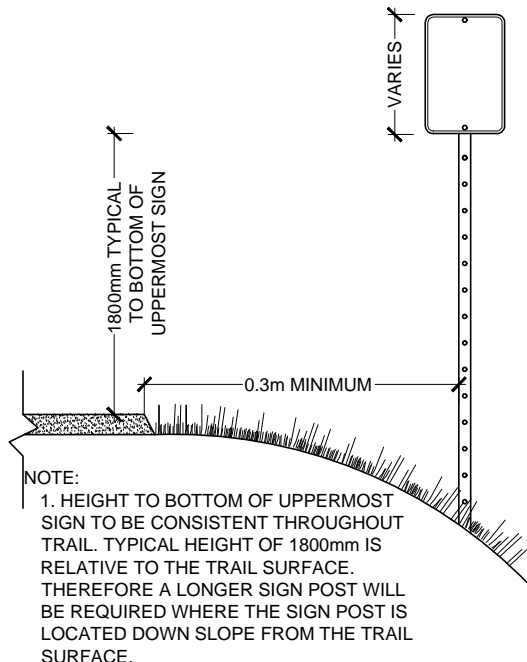
SIGNAGE FACE
STANDARD ENGINEERING GRADE
SHEETING
HOLES - METRO PUNCH

MOUNTING
THE SIGN FACE MUST BE SECURED
TO A POST WITH TWO GALVANIZED
12MM HEX BOLTS AND NUTS WITH
FLAT WASHERS ON BOTH SIDES



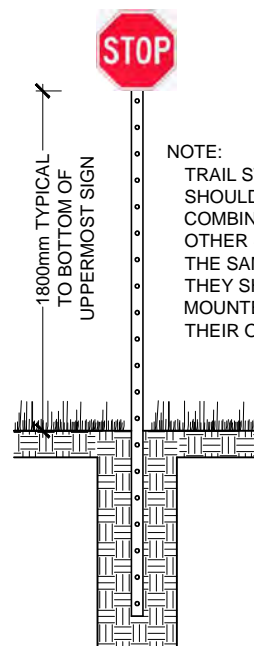
SIGN MOUNTING DIRECTLY INTO GROUND

SIGN MOUNT WITH CONCRETE FOOTING

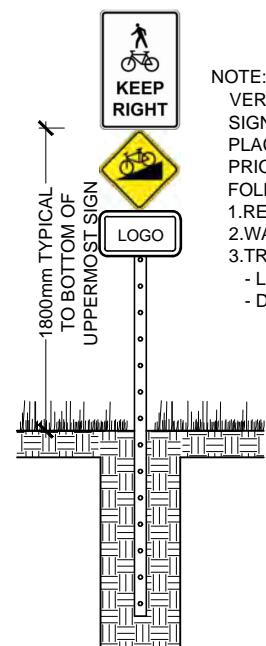


- NOTE:
1. HEIGHT TO BOTTOM OF UPPERMOST SIGN TO BE CONSISTENT THROUGHOUT TRAIL. TYPICAL HEIGHT OF 1800mm IS RELATIVE TO THE TRAIL SURFACE. THEREFORE A LONGER SIGN POST WILL BE REQUIRED WHERE THE SIGN POST IS LOCATED DOWN SLOPE FROM THE TRAIL SURFACE.

SIGN MOUNT DOWN SLOPE OF TRAIL



- NOTE:
- TRAIL STOP SIGNS
SHOULD NOT BE
COMBINED WITH
OTHER SIGNS ON
THE SAME POST,
THEY SHOULD BE
MOUNTED ON
THEIR OWN POST



- NOTE:
- VERTICAL
SIGNAGE
PLACEMENT BY
PRIORITY IS AS
FOLLOWS:
1. REGULATORY
 2. WARNING
 3. TRAIL
 - LOGO
 - DIRECTIONAL

SIGN PRIORITY

FUNCTION:

- USED TO ALERT TRAIL USERS ABOUT UPCOMING OBSTACLES OR CHANGES ALONG THE TRAIL.
- REGULATORY AND WARNING SIGNS FOLLOW THE SAME CONVENTIONS AS ROADWAY SIGNS RECOMMENDED BY THE TRANSPORTATION ASSOCIATION OF CANADA (TAC).

OTHER NOTES:

- MOUNT ON EXISTING POLES. ALSO CONSIDER SIMPLE MOUNTING SYSTEMS (E.G. TELESAR POST)
- SIMPLER MOUNTING SYSTEMS CAN HELP WITH KEEPING COSTS DOWN.
- ANY LETTERING ON REGULATORY SIGNAGE SHOULD BE A MINIMUM HEIGHT OF 100mm.
(LETTERING CAN BE SMALLER ON CUSTOM INFORMATION SIGNS)

TYPICAL LOCATION:

- PLACED IN ADVANCE OF AN UPCOMING HAZARD.
- USED TO MARK THE ACTUAL LOCATION OF THE HAZARD.
- CONSULT WITH LOCAL ENGINEERING/TRAFFIC DEPARTMENTS FOR THE PLACEMENT OF ANY SIGNS ALONG ROADWAYS. (E.G. ADVANCED WARNING FOR MOTORISTS APPROACHING TRAIL CROSSING AHEAD)

SIGNAGE

SCALE = NTS

Figure D.14 - REGULATORY, WARNING AND CUSTOM INFORMATION SIGNS



50mm x 250mm RAILING CAP TO HAVE 9mm 45° CHAMFER ON TRAIL SIDE TOP EDGE

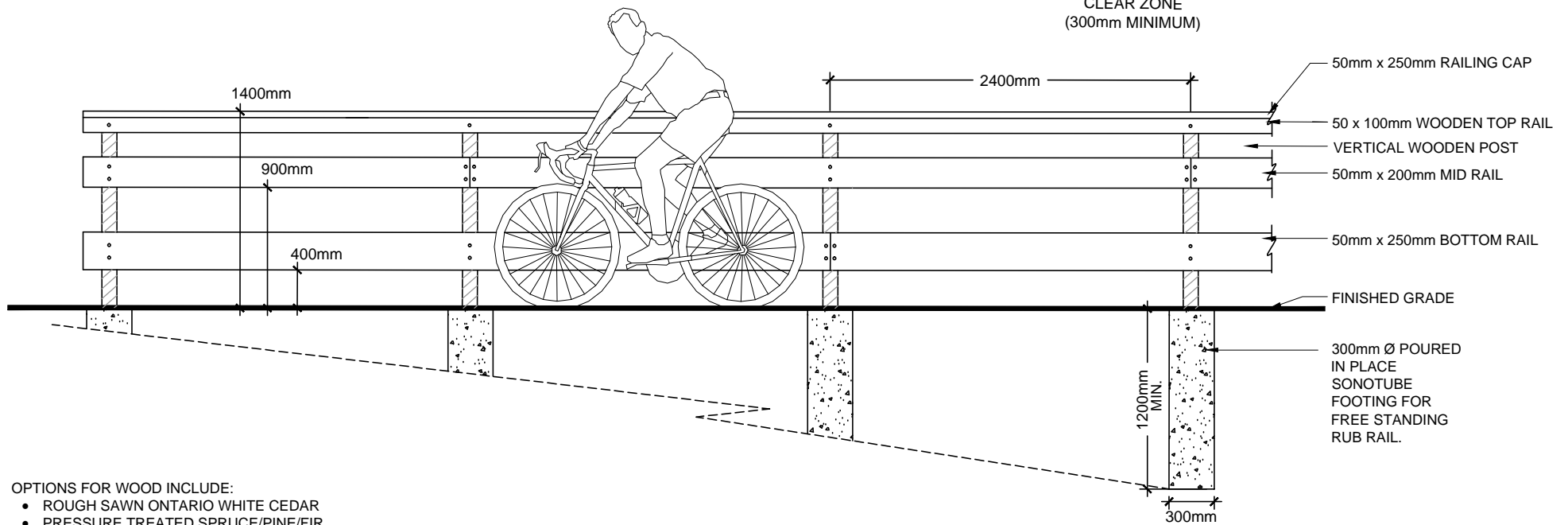
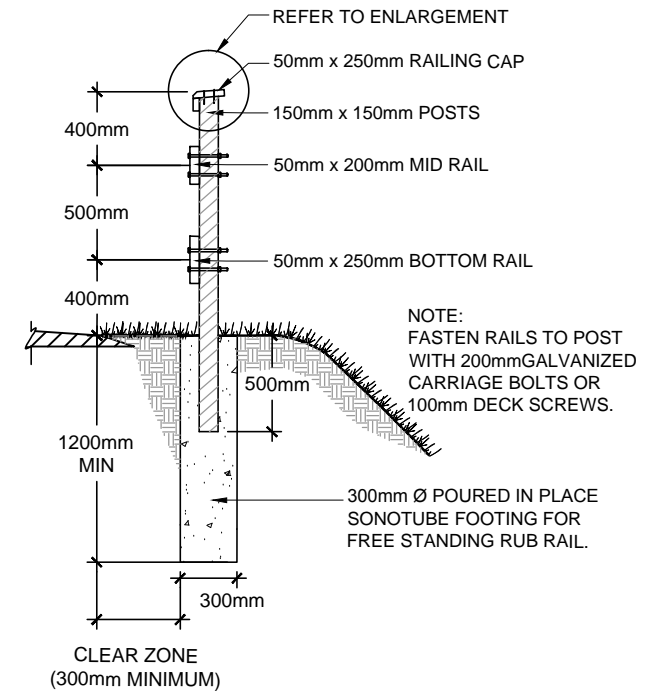
50 x 100mm TOP RAIL

150 x 150mm PRESSURE TREATED SPRUCE / PINE / FIR POSTS

ATTACH RAILING CAP TO POSTS WITH (4) EVENLY SPACED 100mm DECK SCREWS

TOP OF POST TO HAVE SLIGHT ANGLE CUT (E.G. 5°) TO FACILITATE WATER RUN OFF

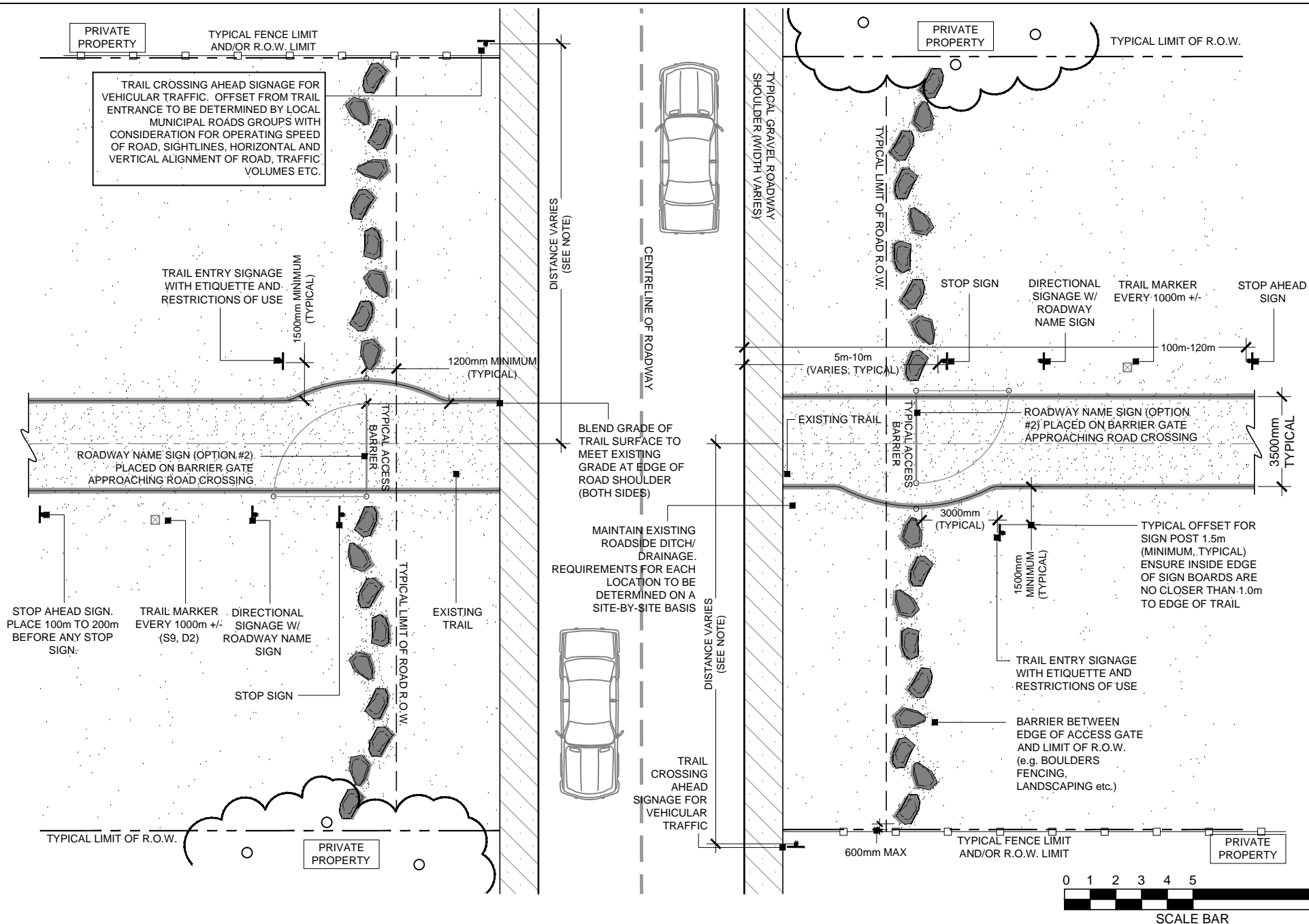
ENLARGEMENT



TRAIL TYPES

SCALE = 1:40

Figure D.15 - 1.4m HIGH CYCLIST RUB RAIL

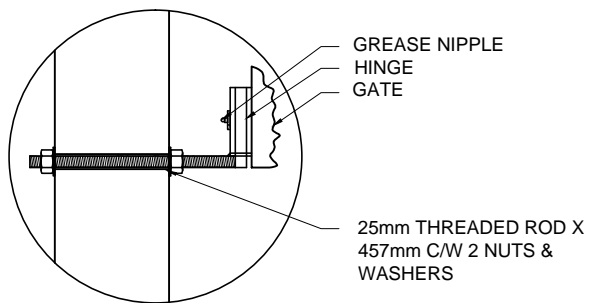


ROAD CROSSINGS

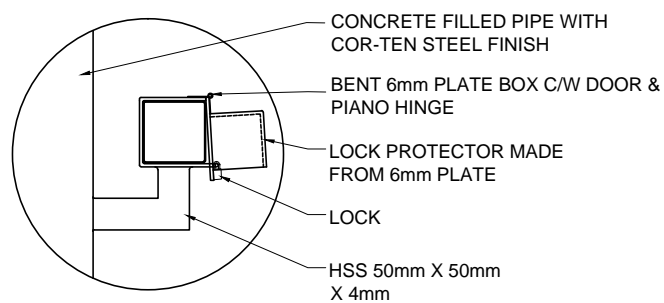
SCALE = 1:200

Figure D.16 - RURAL ROAD CROSSING

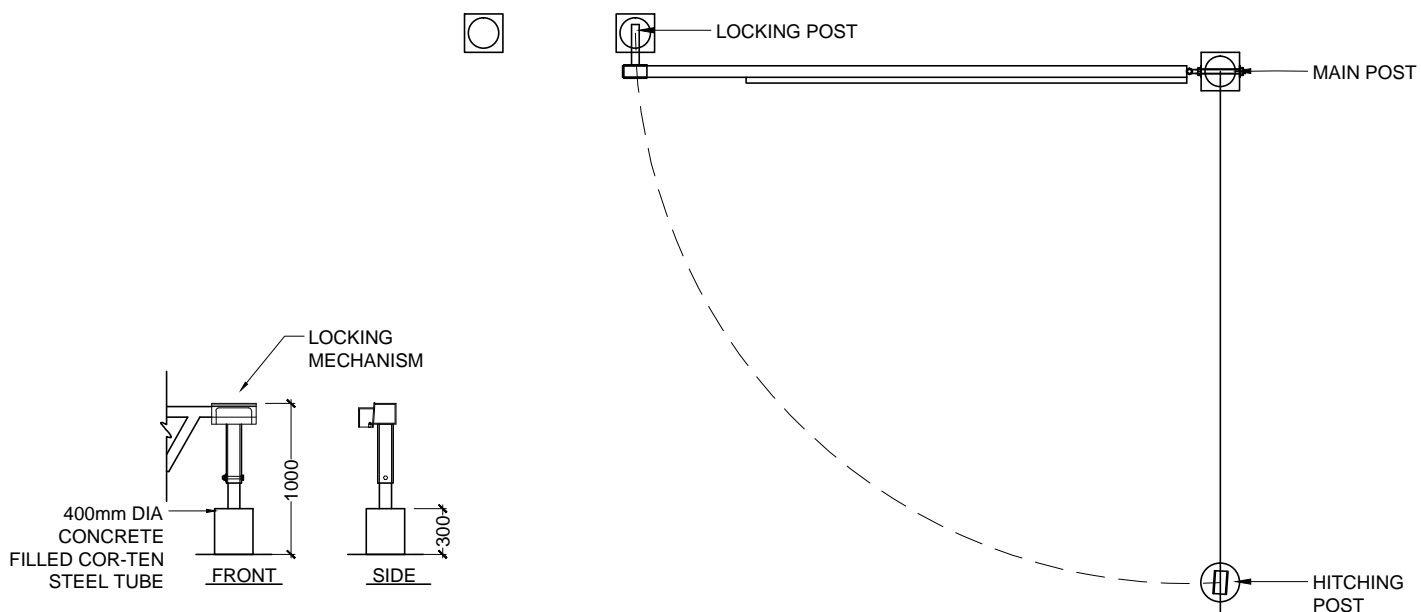




HINGE DETAIL

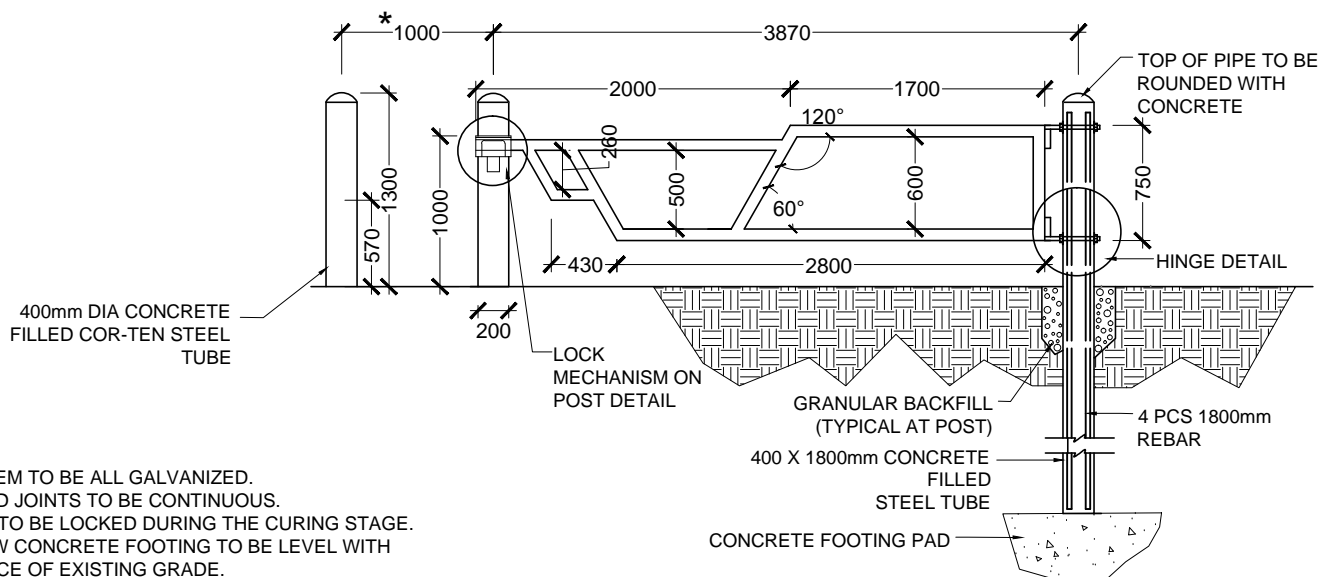


LOCK MECHANISM DETAIL



PLAN VIEW OF GATE

HITCHING POST



ELEVATION OF GATE

NOTES:

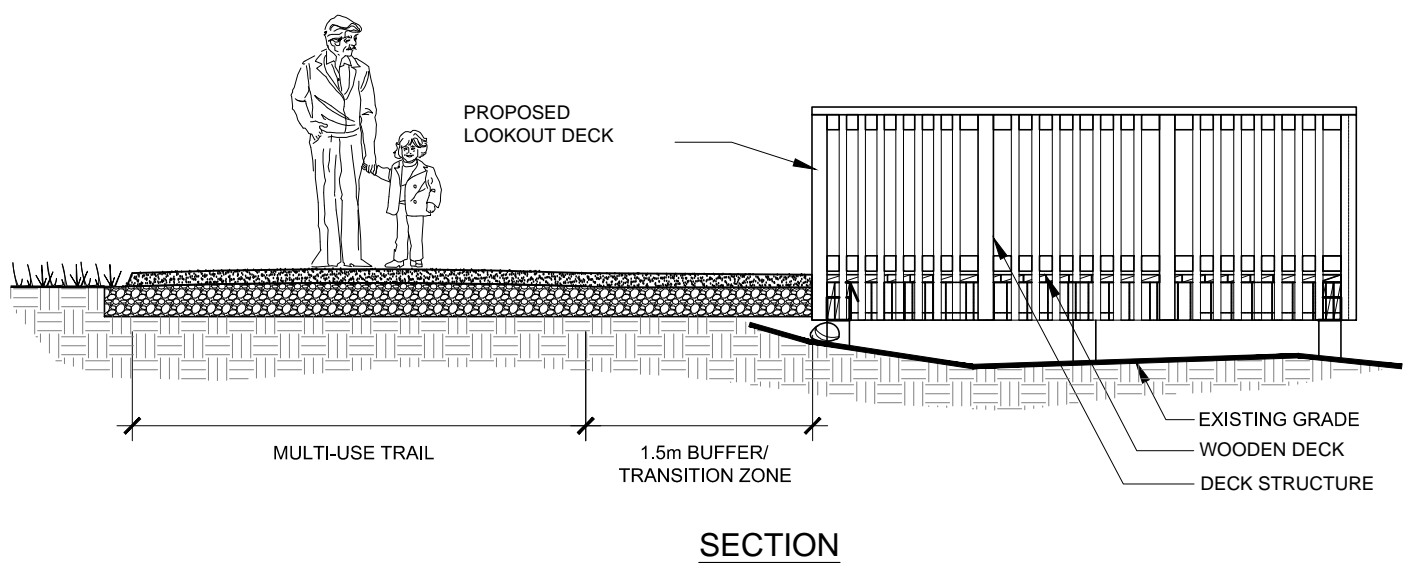
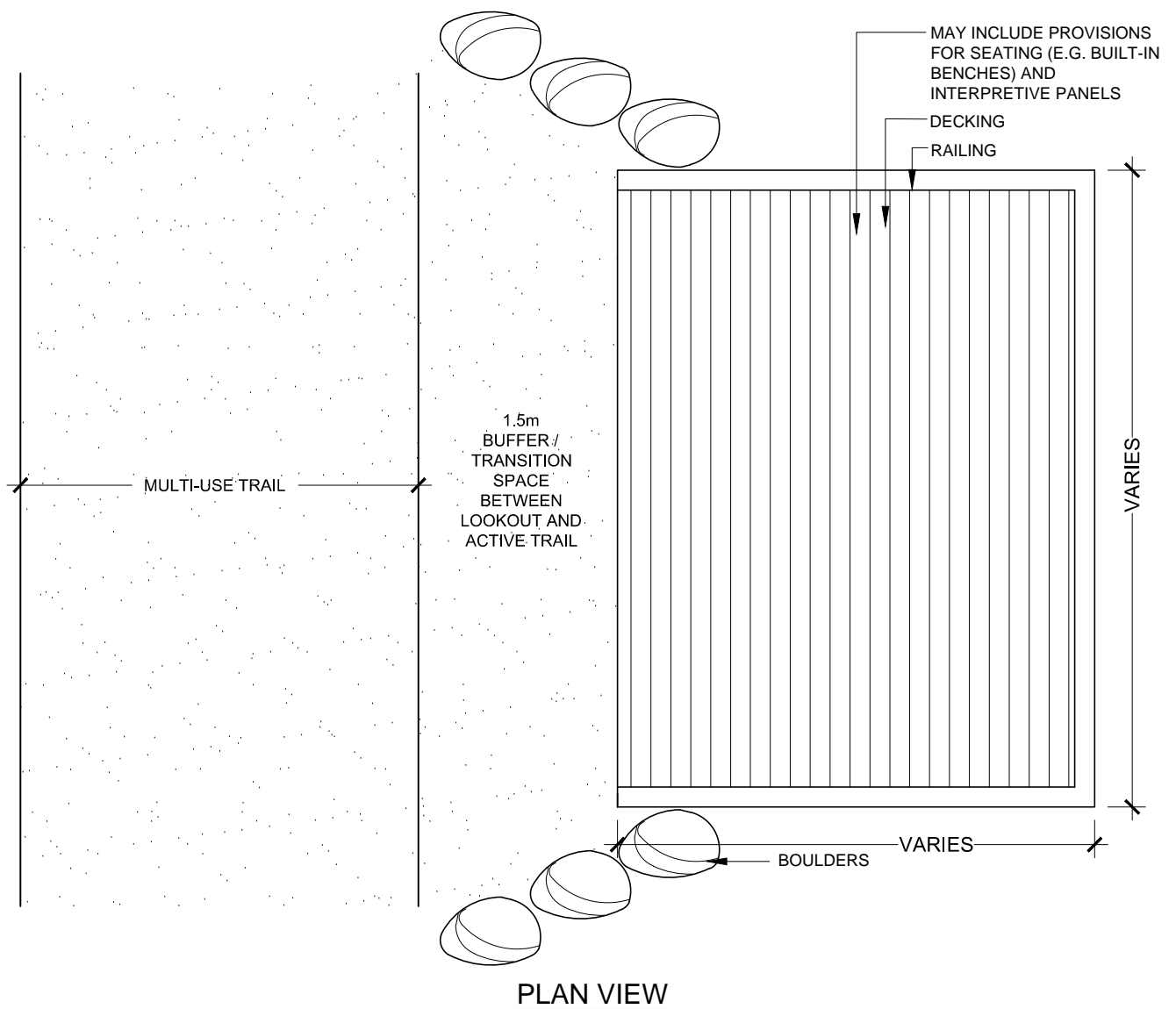
- GATE SYSTEM TO BE ALL GALVANIZED.
- ALL WELDED JOINTS TO BE CONTINUOUS.
- ALL GATES TO BE LOCKED DURING THE CURING STAGE.
- TOP OF NEW CONCRETE FOOTING TO BE LEVEL WITH THE SURFACE OF EXISTING GRADE.
- ALL HARDWARE TO BE GALVANIZED.
- ALL DIMENSIONS IN mm (MILLIMETERS).
- ALL METAL COMPONENTS SHALL CONFIRM TO RELEVANT OPSS.
- *• PERMANENT OPENING TO BE A MINIMUM OF 1000mm FOR ACCESSIBLE TRAILS

TRAIL ACCESS

SCALE = 1:50

Figure D.17 - HEAVY-DUTY SWING GATE FOR RURAL LOCATIONS



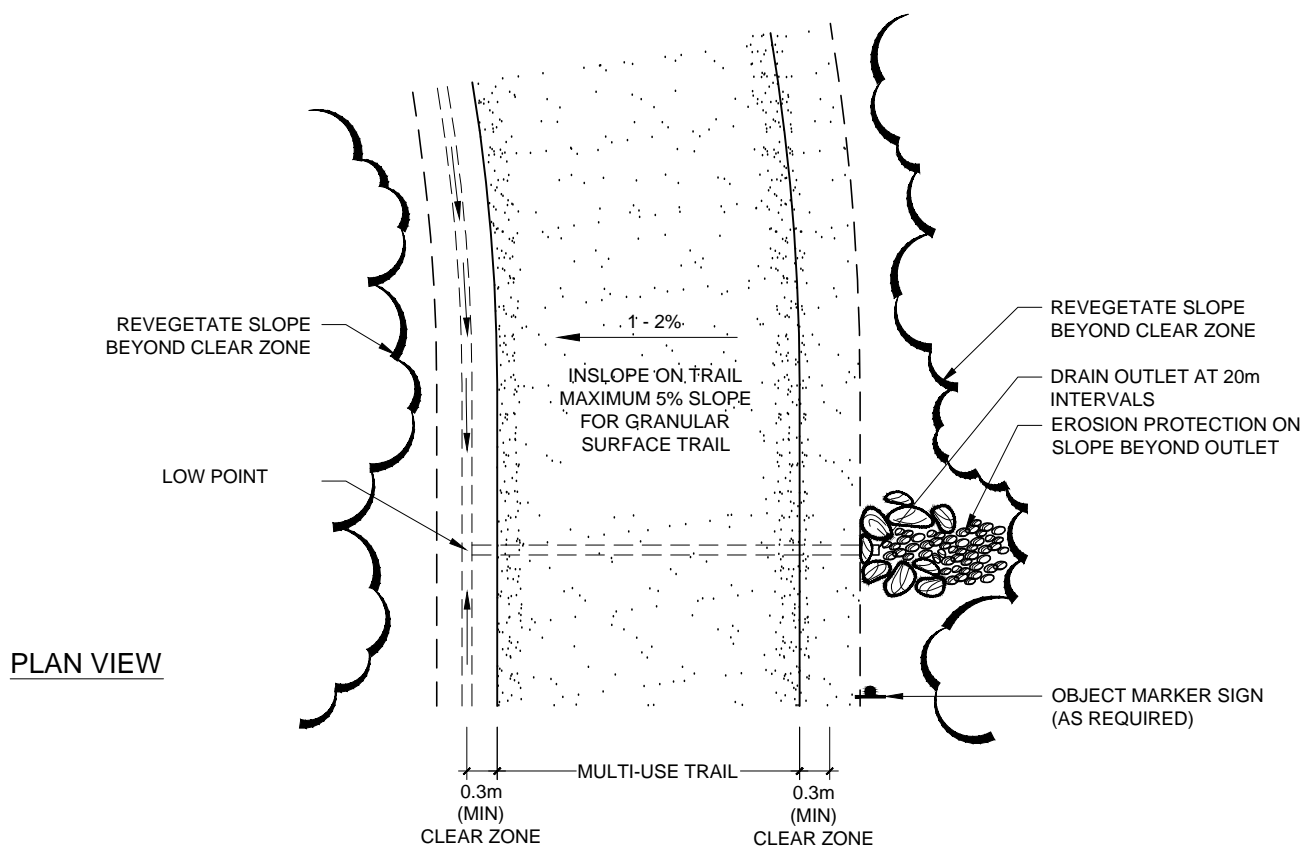
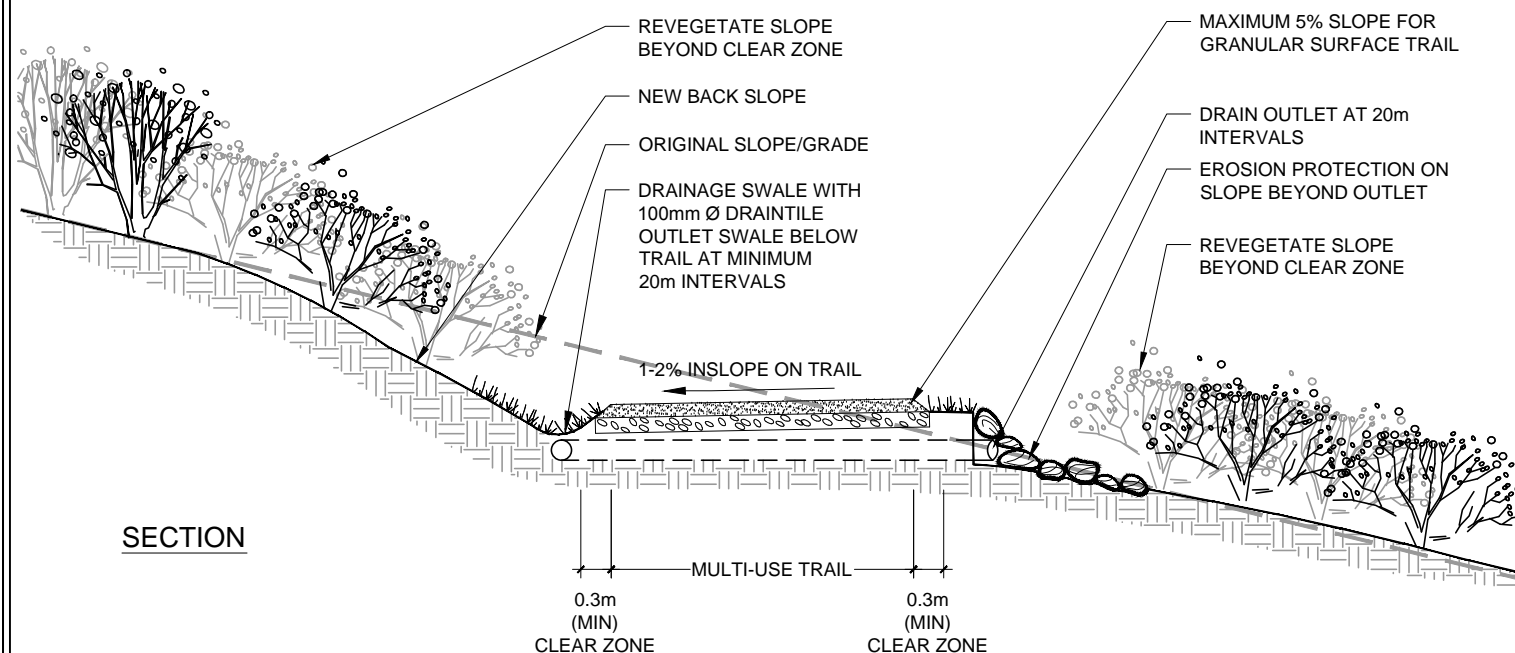


TRAIL TYPES

SCALE = 1:50

Figure D.18 - TRAIL LOOKOUT STRUCTURE

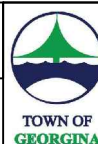


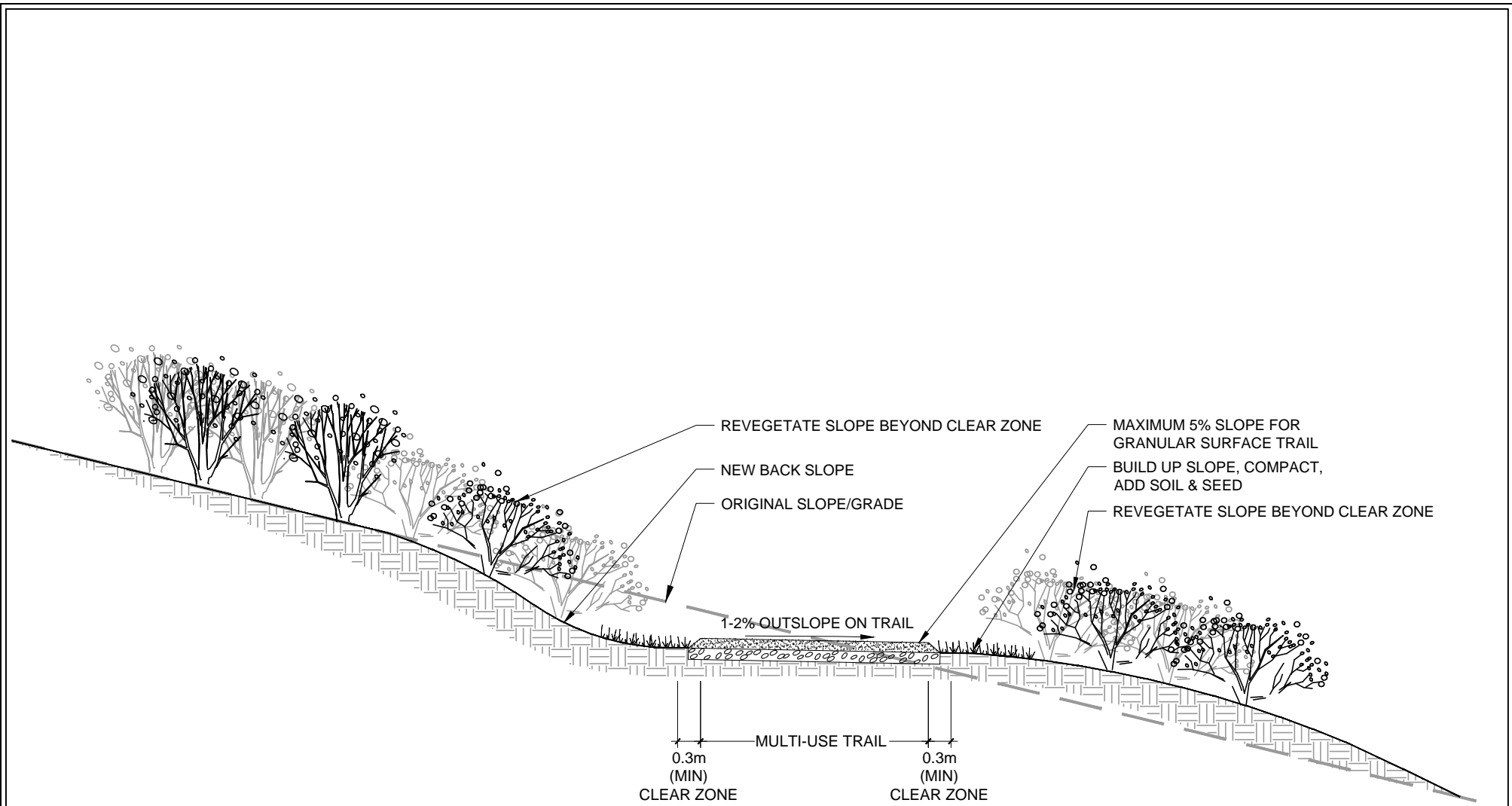


TRAIL TYPES

SCALE = 1:75

Figure D.19 - TRAIL ON SLOPE - INSLOPE WITH DRAINAGE PIPE





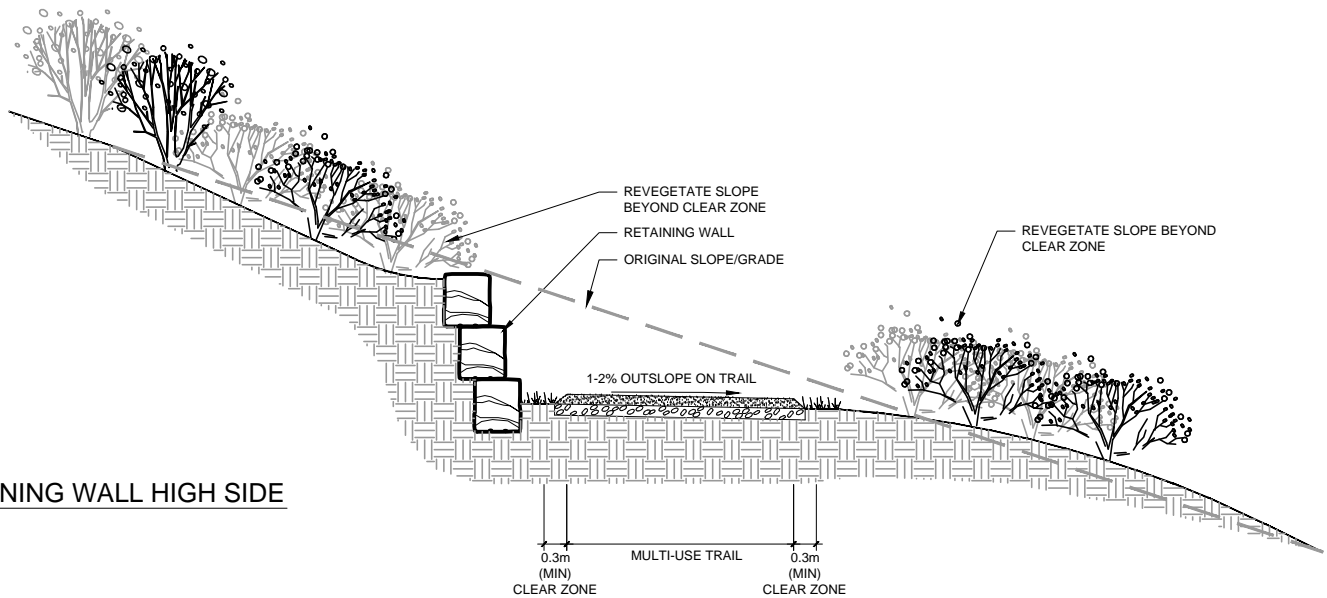
TRAIL TYPES

SCALE = 1:75

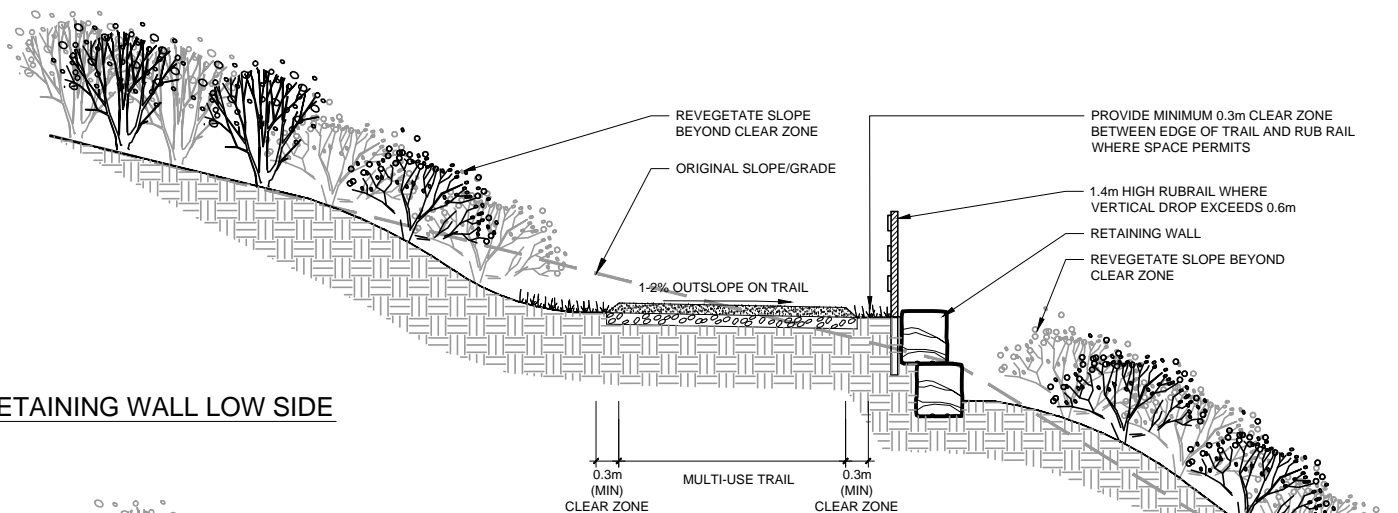
Figure D.20 - TRAIL ON SLOPE - OUTSLOPE



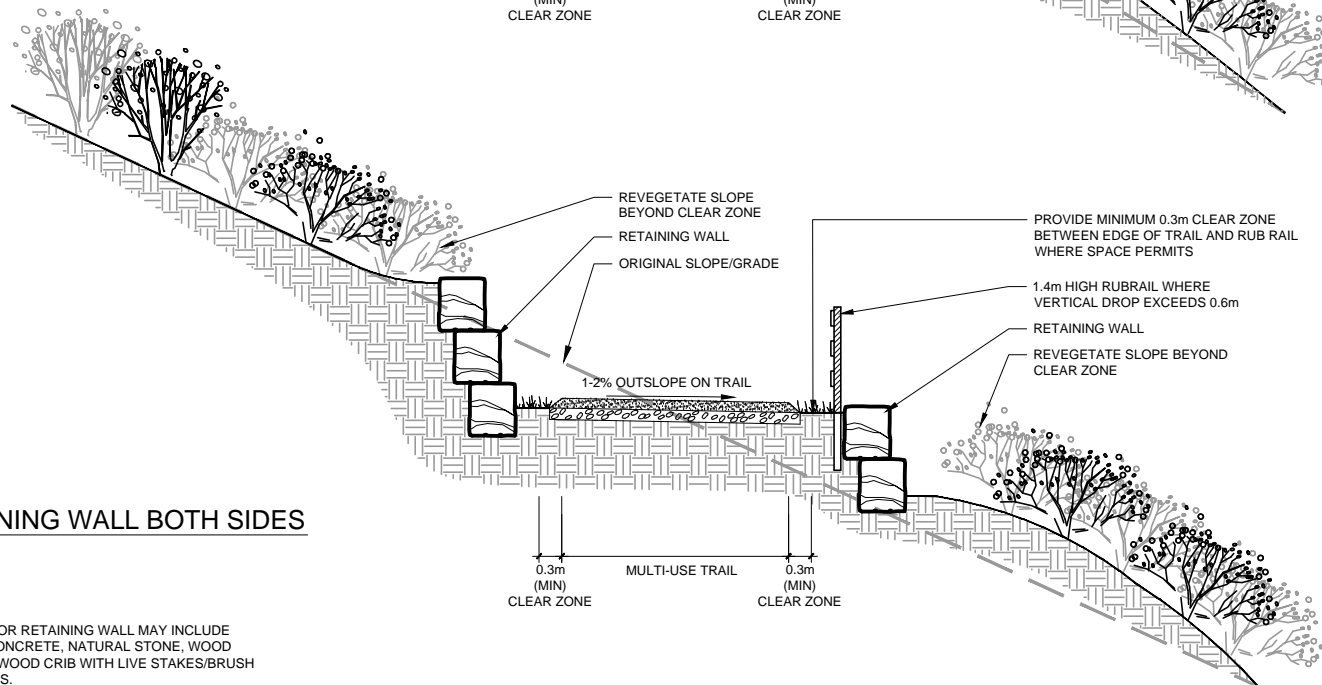
RETAINING WALL HIGH SIDE



RETAINING WALL LOW SIDE



RETAINING WALL BOTH SIDES



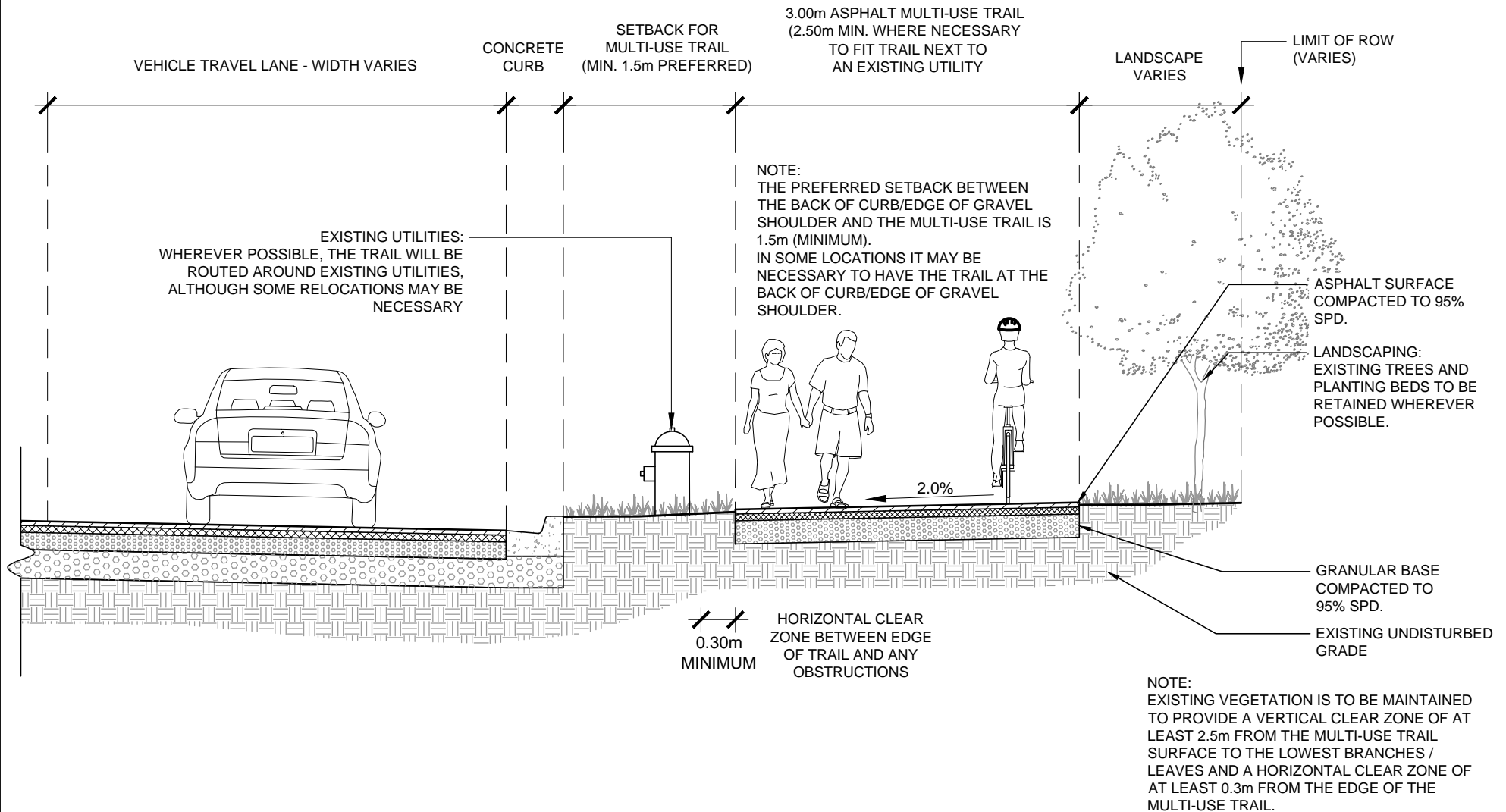
NOTE:
MATERIAL FOR RETAINING WALL MAY INCLUDE
PRECAST CONCRETE, NATURAL STONE, WOOD
TIMBER OR WOOD CRIB WITH LIVE STAKES/BRUSH
MATTRESSES.

TRAIL TYPES

SCALE = 1:100

Figure D.21 - TRAIL ON SLOPE - RETAINING WALLS



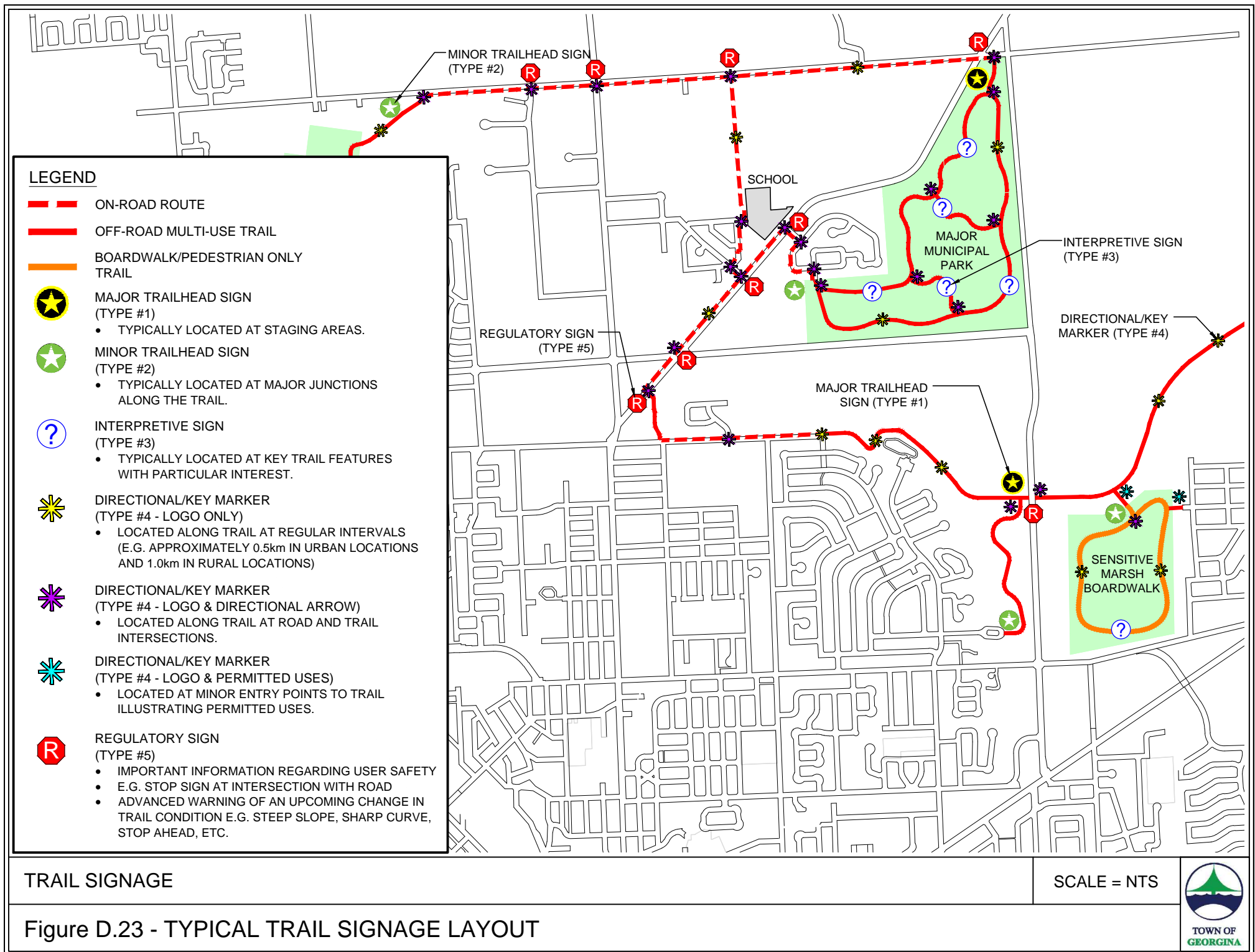


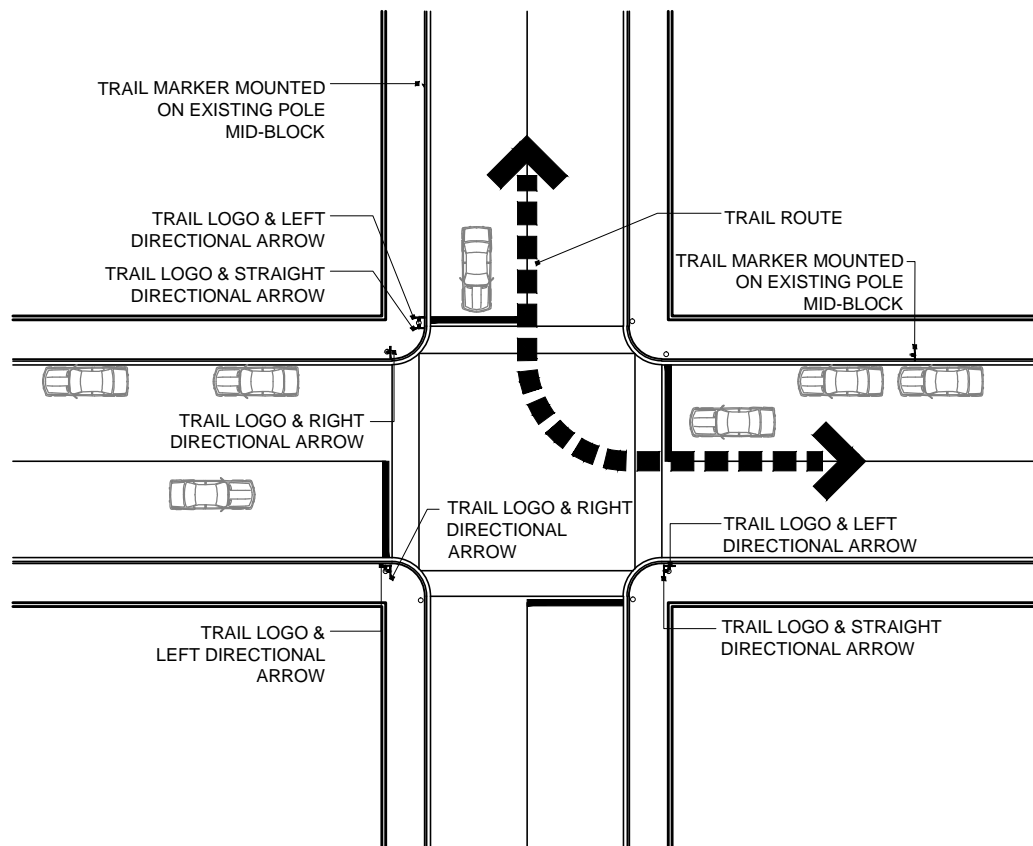
TRAIL TYPES - WITHIN ACTIVE ROAD RIGHT-OF-WAY

SCALE = 1:50

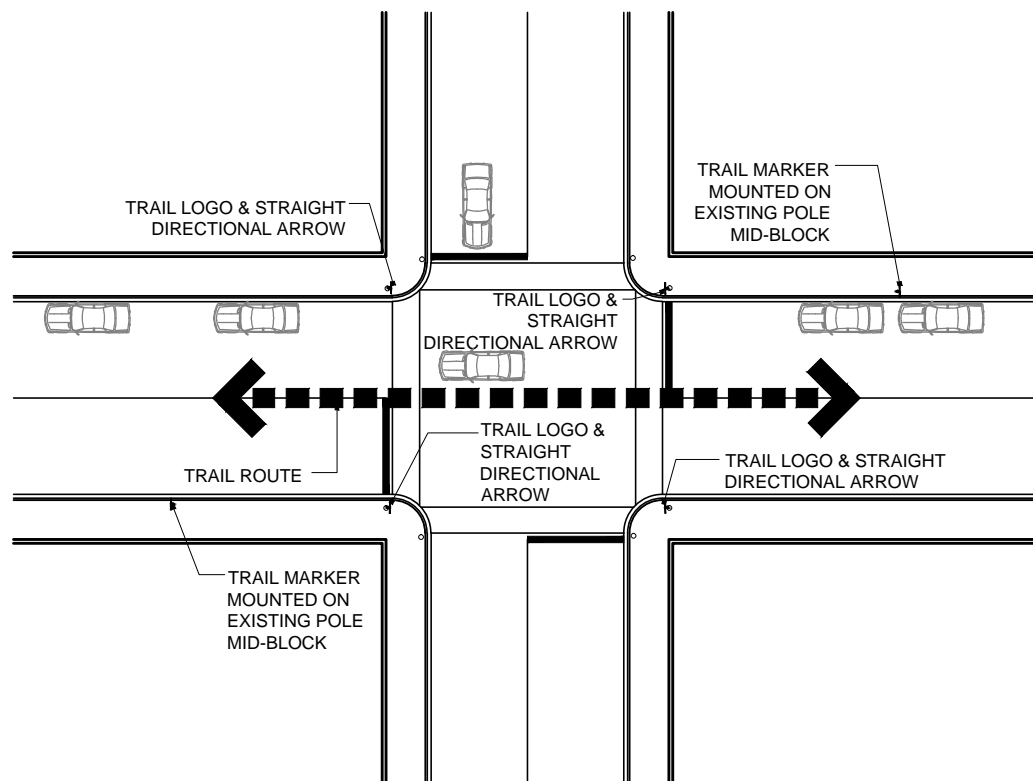
Figure D.22 - 3.0m WIDE ASPHALT MULTI-USE TRAIL







TRAIL ROUTE TURNS AT INTERSECTION



TRAIL ROUTE RUNS STRAIGHT THROUGH INTERSECTION

ROAD CROSSINGS

SCALE = NTS

Figure D.24 - URBAN INTERSECTION CROSSINGS





D.4.3 Designing for Intersections & Crossings

A significant challenge when implementing a trail and active transportation system is how to accommodate users when crossing various physical barriers and roads. The following section provides guidance on crossing design.

D.4.3.1 Minor Roads

In the case of lower volume and lower speed roads, the crossing should include the following:

- Creation and maintenance of an open sight triangle at each crossing point;
- Access barriers to prevent unauthorized motorized users from accessing the pathway;
- Advisory signing along the roadway in advance of the crossing point to alert motorists to the upcoming crossing;
- Signing along the pathway to alert users of the upcoming roadway crossing;
- Alignment of 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;
- Concrete ramp in boulevard between the sidewalk and roadway; and
- Curb ramps on both sides of the road.

Pavement markings, to delineate a crossing, should not be considered at “uncontrolled” trail intersections with roads as trail users are required to wait for a gap in traffic before crossing at these locations. Pavement markings designed to look like a pedestrian cross over may give pedestrian and trail users the false sense that they have the right-of-way over motor vehicles, which is contrary to the Highway Traffic Act of Ontario for uncontrolled intersections. In some locations, signing on the trail may not be enough to get trail users to stop before crossing the road. Under these circumstances or in situations where the sight lines for motorists are reduced and/or where there is a tendency for motorists to travel faster than desirable, the addition of other elements into the trail crossing may be necessary. Changing the trail alignment may help to get trail users to slow and stop prior to crossing. Changes to the streetscape may also provide a cue and traffic calming effect for vehicles.



Trail and Active Transportation Guidelines

D-24:

Trail crossing of local minor roads at mid-block locations include advance advisory pedestrian crossing signs on the roadway approaches and a yield or stop sign on the trail approaches.

D.4.3.2 Crossing with Median Refuge Island

Pedestrian refuge islands are medians that are placed in the centre of the roadway separating opposing lanes of traffic. They allow trail users to cross one direction of traffic at a time, resting on the refuge island in the centre. They are particularly suited for roadways with multiple lanes since the cognitive requirements to select a gap in traffic traveling in two directions in multiple lanes is considerably higher than that required for cross two lanes of traffic. A number of jurisdictions have implemented Pedestrian Refuge Islands. Guidelines for the typical design elements for a pedestrian refuge island are as follows:

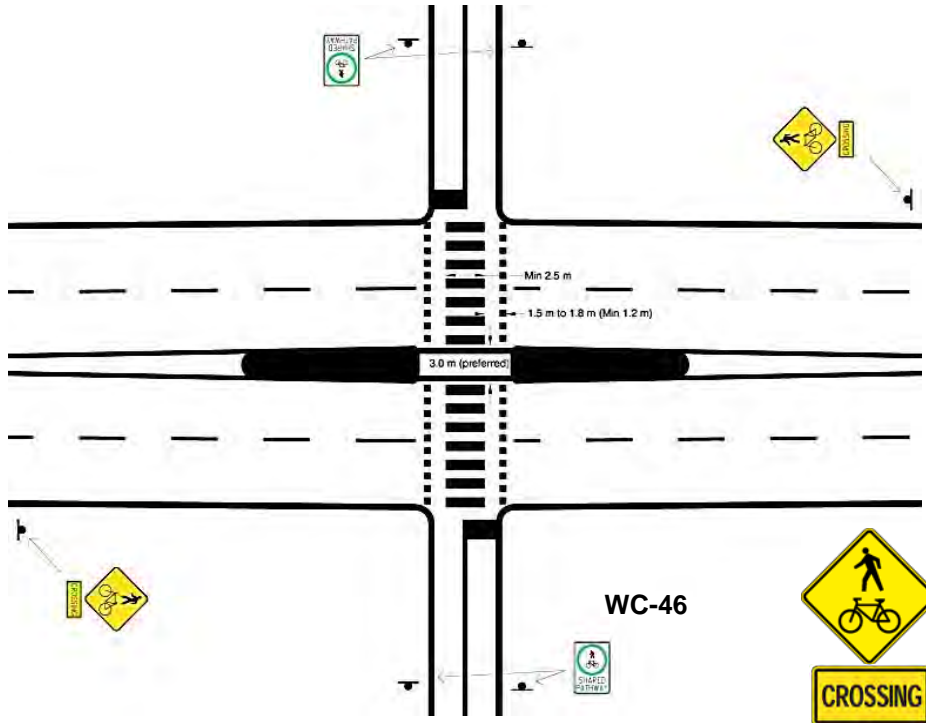
- Islands are typically a minimum of 6 m in length;
- Islands should be a width of at least 1.8 m wide, but 2.4 m is preferred to accommodate wheelchairs in a level landing 1.2 m wide plus 0.6 m wide detectable warning devices on each side. The 2.4 m width will also accommodate bicycles in the refuge;
- Curb ramps are provided to allow access to the roadway and island for wheelchair users, and detectable warning devices (0.6 m in width) should be placed at the bottom of the curb ramps;
- The pathway on the island is constructed of concrete, not asphalt. Users with low vision or complete visual impairment can better detect the change in texture and contrast in colour supplemented by the detectable warning devices to locate the refuge island;
- Appropriate tapers are required to diverge traffic around the island based on the design speed of the roadway;
- The pathway on the island can be angled so that pedestrians are able to view on-coming traffic as they approach the crossing;
- Illumination should be provided on both sides of the crossing;
- Signage associated with the pedestrian refuge island includes “Keep Right” and “Object Marker” warning signs installed on the island facing traffic, and “Pedestrian Crossing Ahead” warning signs installed on the roadway approaching the crossing. “Wait for Gap” warning signs can be installed on the far side of the crossing and on the refuge island if pedestrians are failing to cross in a safe manner;



TRAILS & AT DESIGN GUIDELINES



- Crosswalk markings are not provided unless the crossing is at an intersection controlled by signals, stop or yield signs, or controlled by a school crossing guard; and
- Railings on the island to control pedestrian access are not recommended because they are a hazard in potential collisions (spearing of driver or pedestrian). Some pedestrians will walk in front of or behind the island to avoid the railings, a less safe refuge location than on the island.



Median Pedestrian Refuge Island

Credit: TAC Bikeway Traffic Control Guidelines. 2012

There are a number of design alternatives which could be used to ensure the safe crossing of roadways by pedestrians and cyclists when on trails. One of the design alternatives that has recently emerged is a Cross-Ride. A cross-ride can be used by pedestrians and cyclists when crossing a roadway and provides a designated space for both users and helps to prevent possible conflict areas at crossings. Recently implemented in communities such as the City of Mississauga the Burlington, this innovative design features is now endorsed and promoted by OTM Book 18.



In addition, there may be some instances where proposed trail crossings are identified in urban areas within the Town of Georgina. In these instances, the Town is encouraged to explore the design and implementation of an urban trail crossing.

D.4.3.3 Midblock Pedestrian Signal

The midblock pedestrian signal is a device to assist pedestrians crossing major streets and is a more positive and effective pedestrian crossing device than a pedestrian crossover (PXO).

A midblock pedestrian signal includes standard traffic signal indications to control traffic on the major street and standard pedestrian “Walk” and “Don’t Walk” signals, activated by push buttons, for pedestrians wishing to cross the major street at the designated crossing point. The graphics below illustrates an application of a midblock pedestrian signal one with a median (top) and the other without (bottom).

Midblock pedestrian signals may be considered when:

- A multi-use path or trail crosses a high volume and/or multi-lane road;
- A grade separation is not practical; and
- Crossing nearby.

The graphic below illustrates an application of a midblock pedestrian signal.



Mid-block Pedestrian Signal with Median Refuge

Credit: MMM Group, 2010



Trail and Active Transportation Guidelines

D-25:

At-grade mid-block multi-use pathways crossings of collector and arterial roadways should be controlled by a pedestrian signal or pedestrian cross over where possible.

D.4.3.4 Active Railways

Currently, in order to establish a pathway crossing of an active rail line, proponents must submit their request directly to the railroad company. Submissions need to identify the crossing location and its basic design. Designs should be consistent with Draft RTD-10, Road/Railway Grade Crossings: Technical Standards and Inspection, Testing and Maintenance Requirements (2002) available from Transport Canada. In the event that an agreement cannot be reached on some aspect of the crossing, then an application may be submitted to the Canadian Transportation Agency, who will mediate a resolution between the parties.

The graphic below illustrates an at-grade crossing of an active railway in Newmarket, ON and some design concepts and considerations which could be explored for a similar location.



At-Grade Trail Crossing of a Railway - Location: Newmarket, ON

Credit: MMM Group, 2012

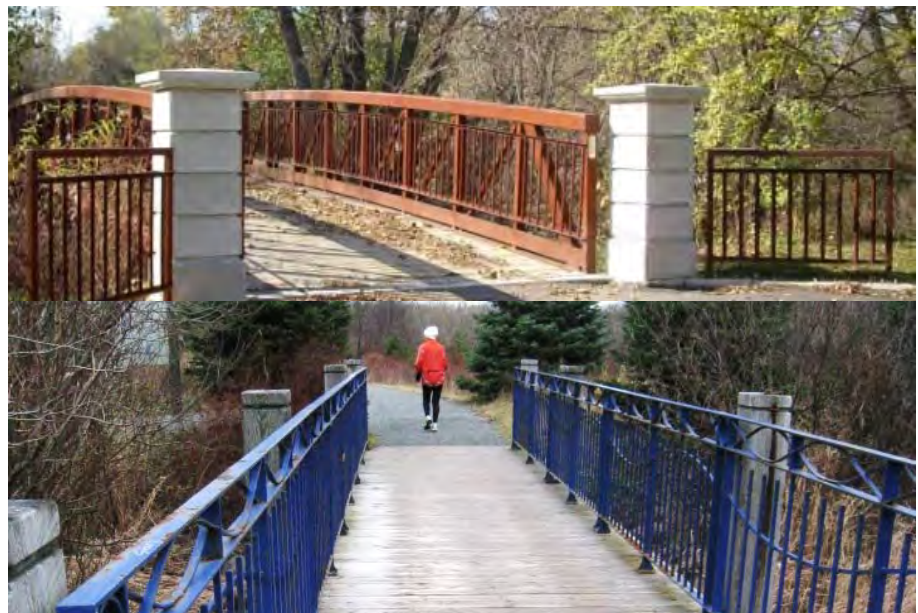


D.4.3.5 Bridges

Where possible, the trail network should make use of existing bridges, including pedestrian bridges, vehicular bridges and abandoned railway bridges in appropriate locations. In cases where this is not possible, a new structure will be needed and the type and design of a structure needs to be assessed on an individual basis.

The following are some general considerations: In most situations the prefabricated steel truss bridge is a practical, cost effective solution;

- In locations where crossing distances are short, a wooden structure constructed on site may be suitable;
- Railings should be considered if the height of the bridge deck exceeds 60cm above the surrounding grade, and should be designed with a “rub rail” to prevent bicycle pedals and handlebars from becoming entangled in the pickets;
- When considering barrier free access to bridges, an appropriate hardened surface should be employed on the trail approaches and bridge decking should be spaced sufficiently close to allow easy passage by a person using a mobility-assisted device;
- Decking running perpendicular to the path of travel is preferred over decking running parallel, as the latter is more difficult for use by wheelchairs, strollers, in-line skates and narrow tired bicycles;
- Maintenance considerations; and
- Accessibility.



Sample Pathways on Bridges

Top: Brampton, ON; Bottom: St. John's, Nfld. Credit: MMM Group, 2012



D.4.3.6 Underpasses & Tunnels

Often an underpass or tunnel is the only way to cross significant barriers such as elevated railways and multi-lane highways. Designing trails through underpasses and tunnels can be challenging because of the confined space.

Underpasses should be wide enough to accommodate all trail users whether they are traveling by foot, bicycle, in-line skates, wheelchair or other forms of active transportation. Where feasible, it is suggested that trail widths through underpasses be equal to or greater than that of the approaching trail.

The guidelines provided below outline key considerations for the development of an underpass crossing.

Trail and Active Transportation Guidelines

D-26:

- The minimum recommended underpass or tunnel width for a multi-use pathway is 3.5m. Where the structure exceeds 20m in length, in high traffic and/or urban areas the width should be increased to 4.2m or greater where possible;
- For shorter length underpasses, a vertical clearance of 2.5m is usually sufficient;
- For longer structures a vertical clearance of 3.0m should be considered. If service and/or emergency vehicles are to be accommodated within the underpass, an increase in vertical clearance may also need to be provided;
- Underpasses and tunnels can be a security concern and also present maintenance challenges. To address these issues, tunnels should be well lit with special consideration made to security, maintenance and drainage. Approaches and exits should be clear and open to provide unrestricted views into and beyond the end of the structure wherever possible;
- Abutments should be appropriately painted/marked with reflective hazard markings; and
- Ideally, the transition between the multi-use pathway and underpass crossing should be level and provide for accessibility. In the case where an underpass crosses beneath ground-level travel/road ways, ramps should be provided to allow a transition down to the lower grade under the passage, with grade or alignment changes being taken up by the access ramps wherever possible.



D.4.4 Multi-use Trail Surface Type

There are a number of options for trail surfaces, each with advantages and disadvantages related to cost, availability, ease of installation, lifespan and compatibility with various trail users groups. **Table D.11** is a summary of the most commonly used trail surfacing materials along with some advantages and disadvantages for each. There is no one surface material that is appropriate in all locations, and material selection during the design stage must be considered in the context of the anticipated users and location.

Table D.11 – Comparison of Trail Surfacing Materials

Advantage	Disadvantage
Concrete	
<ul style="list-style-type: none">• Smooth surface, can be designed with a variety of textures and colours, providing flexibility for different urban design treatments.• Long lasting, easy to maintain.	<ul style="list-style-type: none">• High cost to install.• Requires expansion joints which can create discomfort for users with mobility aids.• Must be installed by skilled trades people.• Is not flexible; Cracking can lead to heaving and shifting, sometimes creating large step joints.
Unit Pavers	
<ul style="list-style-type: none">• Relatively smooth surface, available in a variety of patterns and colours to meet urban design needs.• Long lasting, can be easily repaired by lifting and relaying.	<ul style="list-style-type: none">• High cost to install.• Users with mobility aids may find textured surface difficult to negotiate.• Must be installed by skilled trades people.
Asphalt	
<ul style="list-style-type: none">• Smooth surface, moulds well to surrounding grades, and is easily negotiated by a wide range of trail user groups.• Relatively easy to install by skilled trades people.• Patterned and coloured surface treatments are available, however patterning in surface may be difficult for some user groups to negotiate, and may	<ul style="list-style-type: none">• Moderate-high cost to install.• Must be installed by skilled trades people. Has a lifespan of 15-20 years depending on the quality of the initial installation. Poor base preparation can lead to significant reduction in lifespan.• Cracking and “alligatoring” occurs near the edges, grass and weeds can invade cracks



TRAILS & AT DESIGN GUIDELINES



Table D.11 – Comparison of Trail Surfacing Materials

Advantage	Disadvantage
<p>not satisfy AODA requirements.</p> <ul style="list-style-type: none"> Retains heat and dries more quickly in comparison to other materials, allowing for easier use during the winter months. 	<p>and speed up deterioration.</p> <ul style="list-style-type: none"> Must be appropriately disposed of after removal.
Granulars (for bases only)	
<ul style="list-style-type: none"> Pit Run: Mixed granular material “straight from the pit” containing a range of particle sizes from sand to cobbles. Excellent for creating a strong sub base, relatively inexpensive (for bases only). 	<ul style="list-style-type: none"> Not appropriate for trail surfacing.
<ul style="list-style-type: none"> ‘B’ Gravel: Similar characteristics to Pit Run with regulated particle size (more coarse than ‘A’ Gravel). Excellent for creating strong, stable and well drained sub bases and bases. Relatively inexpensive (for bases only). 	<ul style="list-style-type: none"> Not appropriate for trail surfacing.
<ul style="list-style-type: none"> ‘A’ Gravel: Similar characteristics to ‘B’ Gravel, with smaller maximum particle size. Excellent for trail bases, may be appropriate for trail surfacing of rail trails in rural areas and woodlands. Easy to spread and regrade where surface deformities develop (for bases only). 	<ul style="list-style-type: none"> Subject to erosion on slopes. Some users have difficulty negotiating surface due to range in particle size and uneven sorting of particles that can take place over time with surface drainage.
Granulars	
<ul style="list-style-type: none"> Clear stone: Crushed and washed granular, particles of uniform size, no sand or fine particles included. Excellent bedding for trail drainage structures and retaining wall backfilling, if properly leveled and compacted, makes an excellent base for asphalt trails. 	<ul style="list-style-type: none"> Not appropriate for trail surfacing.



TRAILS & AT DESIGN GUIDELINES



Table D.11 – Comparison of Trail Surfacing Materials

Advantage	Disadvantage
(for bases only)	
Stone Dust	
<ul style="list-style-type: none">Stone dust (Screenings): Mixture of fine particles and small diameter crushed stone. Levels and compacts very well and creates a smooth surface that most trail users can negotiate easily. Easy to spread and regrade where surface deformities develop. Inexpensive and easy to work with. Widely used and accepted as the surface of choice for most granular surfaced trails.Crushed 3/8" Limestone material. This surfacing material has been used successfully by some municipalities where finer stone dust has washed out.	<ul style="list-style-type: none">Subject to erosion on slopes.Wheelchair users have reported that stone shards picked up by wheels can be hard on hands.May not be suitable as a base for hard surfaced trails in some locations.
Mulches and Wood Chips	
<ul style="list-style-type: none">Bark or wood chips, particle size ranges from fine to coarse depending on product selected, soft under foot, very natural appearance that is aesthetically appropriate for woodland and natural area settings.Some user groups have difficulty negotiating the softer surface, therefore this surface can be used to discourage some uses such as cycling. Generally does not meet AODA requirements.May be available at a very low cost depending on source, and easy to work with.	<ul style="list-style-type: none">Breaks down over time, therefore requires “topping up”.Source of material must be carefully researched to avoid unintentional importation of invasive species (plants and insects).



Table D.11 – Comparison of Trail Surfacing Materials

Advantage	Disadvantage
Earth / Natural Surface	
<ul style="list-style-type: none">• Native soils existing in situ. Only cost is labour to clear and grub out vegetation and regrade to create appropriate surface. Appropriate for trails in natural areas provided that desired grades can be achieved and that soil is stable (do not use organic soils).• May not meet AODA requirements.	<ul style="list-style-type: none">• Subject to erosion on slopes.• Different characteristics in different locations along the trail can lead to soft spots.• Some user groups will have difficulty negotiating surface.
Soil Cement and Soil Binding Agents	
<ul style="list-style-type: none">• Soil Cement is a mixture of Portland Cement and native/parent trail material. When mixed and sets it creates a stable surface that can be useful for “trail hardening” on slopes, particularly in natural settings.• Soil Binding Agents=mix of granulars and polymers that create a solid, yet flexible surface that may be appropriate for “trail hardening” on slopes in natural areas.• May not meet AODA requirements.• Limits volume and weight of materials to be hauled into remote locations.	<ul style="list-style-type: none">• Useful for specific locations only.• Soil binding agents tend to be expensive and have been met with mixed success.
Wood	
<ul style="list-style-type: none">• Attractive, natural, renewable material that creates a solid and level travel surface. Choose rough sawn materials for deck surfacing for added traction.	<ul style="list-style-type: none">• Requires skill to install, particularly with the substructure.• Wood gradually decomposes, this can be accelerated in damp and shady locations, and where wood is in contact with soil.• Expensive to install.



D.4.5 Multi-use Trail Lighting

Lighting multi-use pathways must be carefully considered and can be a key element for designing trail facilities to reflect CPTED principles. Very few municipalities make the decision to light their entire trail system for a number of important reasons, including:

- The cost of initial installation can be prohibitive. General budget figures range from \$130,000 to \$160,000 per kilometre including cabling, transformers, power supply and fixtures;
- Staff time and material cost to properly monitor, maintain lamp fixtures and replace broken and burned out bulbs on an ongoing basis;
- A tendency for vandals to target light bulbs, however, light fixtures can be designed to protect bulbs;
- Energy consumption, however, options for energy-efficiency lighting are available;
- Excessive light pollution, especially in residential rear yards and adjacent to natural areas (though this can be controlled with proper shielding);
- Potential detrimental effects on flora and fauna, especially with light pollution in natural areas such as woodlands and tributary buffers;
- Lighting can promote use which may create greater security if users increase their presence; and
- Inability of the human eye to adapt to the high contrast resulting from brightly lit and dark shadowed areas adjacent one another.





Examples of Different Off-road Trail Lighting Designs

Credit: fayettevilleflyer.com and avistacorp.mwnewsroom.com

Although generally not recommended, there may be some locations along multi-use pathways where lighting may be appropriate. The decision of whether or not to light segments of the multi-use pathway network should be made on a location-specific basis. Some criteria for pathway lighting include:

- Main connections to important attractions such as major parks;
- Heavily used commuter routes (anecdotal information on volume of use supported by user counts);
- Key school routes; and
- Numerous requests for lighting, supported by similar results through public consultation.

Where it has been determined that lighting is appropriate, the quality and intensity of lighting should be consistent with prevailing standards that fit the setting being considered.

D.5 Trail Amenities & Structures

The design and implementation of trail amenities and structures is sometimes overlooked even though they are considered essential features to promote safe use of trail facilities. Developing and maintaining a comprehensive network does not automatically mean people will use the routes and facilities. A user needs to feel comfortable and safe using the system with access to adequate on and off-road trail facilities at strategic locations.



This section outlines some of the amenities that should be considered during the design and implementation of the trail network to complement the implementation of facilities.

D.5.1 Multi-use Trail Structures

D.5.1.1 Gate and Barrier System

Access barriers are intended to allow free flowing passage by permitted user groups, and prohibit access by others. Barriers typically require some mechanism to allow access by service and emergency vehicles. Depending on site conditions, it may also be necessary to provide additional treatments between the ends of the access barrier and limit of the multi-use pathway right of way to prevent bypassing of the barrier altogether.

Within the context of the Town of Georgina, consideration should be given to the design of each existing or proposed access point. The Town should explore the evaluation of select access points to determine if additional treatments are necessary. Additional treatments can consist of plantings, boulders, fencing or extension of the barrier treatment depending on the location. There are many design alternatives for trail access barriers, with some proving to be more successful than others. Gates and barrier features can generally be grouped into three categories:

- Bollards;
- Offset Swing Gates; and
- Single Swing Gates.

In general, the Town should assume that the design of the gates and bollards should be done in a way that encourages cyclists to dismount.

Bollards

The bollard is the simplest and least costly barrier. The structure can range from permanent, direct buried wood or metal posts, to more intricately designed cast metal units that are removable by maintenance staff. An odd number of bollards (usually one or three) can be placed in the multi-use pathway bed to create an even number of “lanes” for users to follow as they pass through the barrier.



Although the removable bollard system provides flexibility to allow service vehicle access, they can be difficult to maintain as the metal sleeves placed below grade can be damaged by equipment and can become jammed with gravel and debris from the trail bed.



Bollards Implemented at Trail Access Point – Trans Canada Trail, BC

Credit: John Luton, Flickr

Swing Gates

A single swing gate combines the ease of opening for service vehicle access, with the ease of passage of the bollard. Gates also provide a surface / support for mounting signage. The swing gate should provide a permanent opening to allow permitted users to flow freely through the barrier. The width of the permanent opening must be carefully considered so that it will allow free passage by wheelchairs, wide jogging, double strollers and bicycle trailers and electric scooters. However, they should not be designed to allow passage by unauthorized vehicles such as snowmobiles and all-terrain vehicles.

The offset gate is similar to the single swing gate, except that barriers are paired and offset from one another. Although they can be effective in limiting access by unauthorized users and can be easily opened by operations staff, some groups including cyclists, especially cyclists pulling trailers and wheelchair users, can have difficulty negotiating the offset swing gate if the spacing between the gates is not adequate.



In urban areas, the single swing gate or bollard is quite effective for most applications. For large parks, park service access/pathway routes, more rural settings and locations where unauthorized access is an ongoing problem, a more robust single swing gate should be employed.

D.5.1.2 Boardwalks

Where multi-use pathways and trails pass through sensitive environments such as marshes, swamps, or woodlands with a large number of exposed roots, an elevated trail-bed or boardwalk is usually required to minimize impacts on the natural features. If these areas are left untreated, trail users tend to walk around obstacles such as wet spots, gradually creating a wider, often braided trail through the surrounding vegetation. The turnpike and low profile boardwalk are two relatively simple yet effective methods for some trails found within park spaces or those designed specifically for hiking or pedestrian traffic.

The turnpike is a low tech, low cost method that works very well in areas where organic soils are encountered. Various geosynthetic products have also been successfully used to overcome difficult soil conditions. The United States Department of Agriculture (Forest Service) has evaluated many products and design applications in the construction of trails in heavily used parks and on backcountry trails.

Low profile boardwalks have been successfully employed by trail managers across Ontario. In some cases, the simple construction method provides a great opportunity for construction by supervised volunteers where precast “deck blocks” have been used for the foundation of the boardwalk.

Where the trail is in a high profile location, where it is necessary to provide a fully accessible trail, or where the trail surface must be greater than 60cm above the surrounding grade, a more sophisticated design and installation is necessary. This is likely to include engineered footings or abutments, structural elements and railings. A professional who is trained in structural design and approval requirements should be retained for these types of applications. The graphics below illustrate potential design alternatives for trail boardwalks.



Boardwalk Examples- Hamilton, ON (top) & Boardwalk Foundation on Helical Piles (Halton Hills) (right)

Credit: MMM Group

D.5.1.3 Switchbacks and Stairs

Pedestrian and some self-propelled users are capable of ascending grades of 30% or more whereas some users are limited to grades of less than 10%. For example, a slope of 5% is the threshold for a fully accessible facility. Once trail slopes exceed this threshold and slopes are long (i.e. more than 30m) it is important to consider alternative methods of ascending slopes. Two alternatives to consider are switchbacks and stairs.

Where construction is feasible, switchbacks are generally preferred because they allow wheeled users such as cyclists to maintain their momentum, and there is less temptation to create shortcuts, as might be the case where stairways are used. Switchbacks are constructed with turns of about 180 degrees and are used to decrease the grade of the multi-use pathway. A properly constructed switchback also provides outlets for runoff at regular intervals, thus reducing the potential for erosion. Switchbacks typically require extensive grading and are more suited to open locations where construction activity will not cause major disruption to the surrounding environment. Switchbacks can be difficult to implement in wooded areas without significant impacts to surrounding trees.



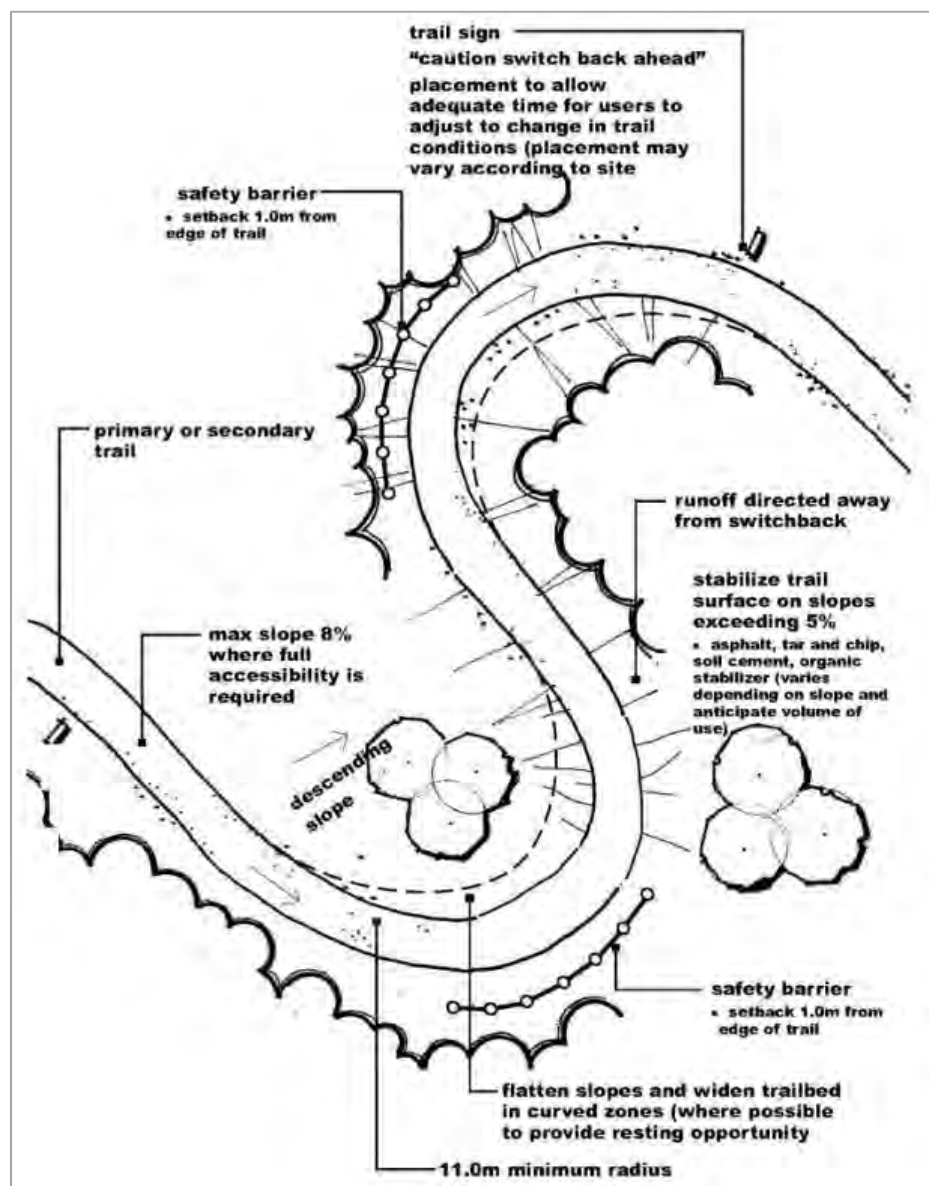
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When designing switchback and stair structures on trails the following should be considered:

- Use slip resistant surfacing materials, especially in shady locations.
- Incorporate barriers on either side of the upper and lower landing to prevent trail users from bypassing the stairs; and
- Provide signs well in advance of the structure to inform users that may not be able to climb stairs.

The graphics below illustrate a sample switch-back design concept and design concept for stairs which could be implemented on a steep trail.





Switchback Example (left) and Woven Metal Stairs, Dundurn Stairs, Hamilton (top)

Credit: MMM Group, Word Press

In addition, there are a number of design concepts which can be considered for trails which are designed in a space with a greater than permitted slope.

Trail and Active Transportation Guidelines

D-27:

When slopes exceed 15%, or where there is inadequate room to develop a switchback or another accessible solution, a stairway system should be considered. In these situations the site should be carefully studied so that the most suitable design can be developed. The following are some considerations for stairway design:

- Provide a gutter integrated into the stairway for cyclists to push their bicycles up and down (where appropriate to have bicycles);
- Develop a series of short stair sections with regularly spaced landings rather than one long run of stairs;
- For long slopes, provide landings at regular intervals (e.g. every 8-16 risers) and an enlarged landing at the mid-way point complete with benches to allow users the opportunity to rest; and



Trail and Active Transportation Guidelines

- On treed slopes, lay the stairway out so that the minimum number of trees will be compromised or removed.



Private Showers & Changing Rooms in Bicycle Friendly Workplaces

Credit: www.velo-city.org/cycle-friendly-workplaces.index.html

D.5.2 Trip End Facilities for Commuters

Installation of showers and lockers at workplaces and educational institutions help to promote the use of the network for utilitarian purposes. Lockers can be used to store personal belongings such as cycling accessories and a change of clothing. Businesses or institutions with employees who commute by bicycle, in-line skating, or other modes should be encouraged to offer these facilities. The facilities which could be considered may include:

- Bicycle Parking which can include a variety of types from the simple post and ring style rack for 2 bicycles to larger and more elaborate systems for large numbers of bicycles at destinations where use/demand is high; and
- Change and Shower Facilities at the cyclist's destination.



Trail and Active Transportation Guidelines

D-28:

The Town of Georgina and its partners should provide trip-end facilities for employees and visitors at all public buildings where feasible, and the private sector should be encouraged to do the same for residential, commercial and institutional developments.

D.5.3 Transit Connections

Providing defined access for cyclists to and from a bus stop is extremely important. Transit stops, particularly bus stops, should be designed in a way that provides safe, convenient, and comfortable places for people to wait. Desirable features at bus stops also include waste-recycling receptacles, seating, lighting and bike racks.

Bike racks on buses is one example of a cycling-transit link. It allows cyclists to ride their bike to a transit stop or station, attach it to a bus-mounted bike rack, travel to their stop, disembark and continue on their bicycle to their final destination. The figures below illustrate a covered bike parking shelter installed at a GO Transit Station and the application and use of a bicycle rack on a Regional bus.

The cycling-transit link can also make access to transit less expensive. In suburban neighbourhoods, population densities are often too low to offer transit service within the typical walking distance of 500 metres of every commuter. Within the last 20 years, many transit agencies built expansive motor vehicle park-and-ride lots or centralized depots as an alternative to costly feeder bus service. Many of these facilities are within easy cycling distance, provide opportunities to increase cycling and transit ridership and reduce taxpayer costs, traffic congestion and air pollution.



Bike Parking & Transit Hub

Credit: www.bikesandtransit.wordpress



Bike Rack on an YRT Bus

Credit: www.yrt.ca

Trail and Active Transportation Guidelines

D-29:

Transit terminals and hubs (e.g. the GO train station) within the Town of Georgina should provide safe and convenient cycling access, including direct links to sidewalks, trails and major destinations

D.5.4 Bicycle Parking

The provision of bicycle parking facilities is essential for encouraging more bicycle use in the Town of Georgina. The lack of adequate bicycle parking supply or type can deter many from considering using their bicycle as a basic mode of transportation. Bicycle parking can be divided into two categories bicycle racks and bicycle lockers.

Bicycle Racks

When designing bicycle racks the following components presented in **Table D.12** must be considered. Additional considerations and guidelines can be found in the **TAC Manual** as well as **OTM Book 18**.



Table D.12 - Design Considerations for Bicycle Racks

The Rack Element	The Rack	The Rack Area
<p>Definition: The portion of a bicycle rack that supports the bicycle.</p>	<p>Definition: A grouping of rack elements.</p>	<p>Definition: The “bicycle parking lot” or area where more than one bicycle rack is installed. Bicycle racks are separated by aisles, much like a typical motor vehicle parking lot.</p>
<p>Key Considerations:</p> <ul style="list-style-type: none"> • Can be joined on any common base or arranged in a regular array and fastened to a common mounting surface. • May be used to accommodate a varying number of bicycles securely in a particular location. • Various types of available bicycle rack designs e.g. “Ribbon” rack, the “Ring” rack, the “Ring and Post” rack and the “Swerve” rack. • Rack should support the bicycle by its frame in two places and prevent the wheel from tipping over. • Should allow front-in parking and back-in parking with a U-lock able to lock the front and the rear wheel. 	<p>Key Considerations:</p> <ul style="list-style-type: none"> • Consist of a grouping of the rack elements either by attaching them to a single frame or allowing them to remain as single elements mounted in close proximity to one another. • Should be securely fastened to a mounting surface to prevent the theft of a bicycle attached to a rack. • Be easily and independently accessed by the user. • Should be arranged to allow enough room for two bicycles to be secured to each rack element. • Should be arranged in a way that is quick, easy and convenient for a cyclist to lock and unlock their bicycle to and from the rack. 	<p>Key Considerations:</p> <ul style="list-style-type: none"> • The recommended minimum width between aisles should be 1.2 m. • Aisle widths of 1.8 m are recommended in high traffic areas. • A 1.8 m depth should be provided for each row of parked bicycles. • Large bicycle rack areas with a high turnover rate should have more than one entrance to help facilitate user flow. • If possible, the rack area should be sheltered to protect the bicycles from the elements. • Bicycle racks should be placed as close as possible to the entrance, no more than 15 m, and should be clearly visible along a major building approach line but not impede pedestrian traffic. • To avoid excessive bicycle riding on the grass, bicycle racks should only be placed on grass surfaces located within close proximity to a paved cycling route, such as on off-road multi-use trail, or an on-road route.

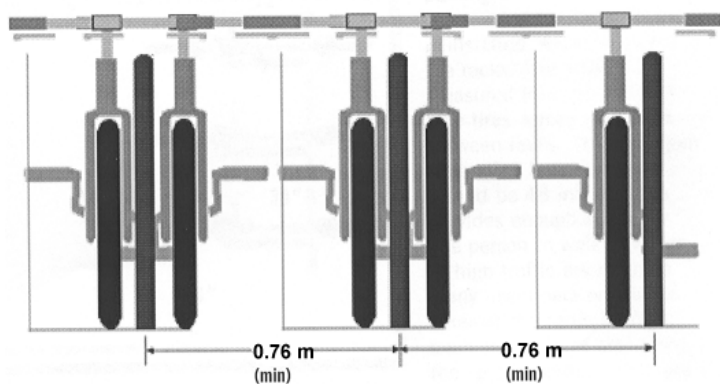
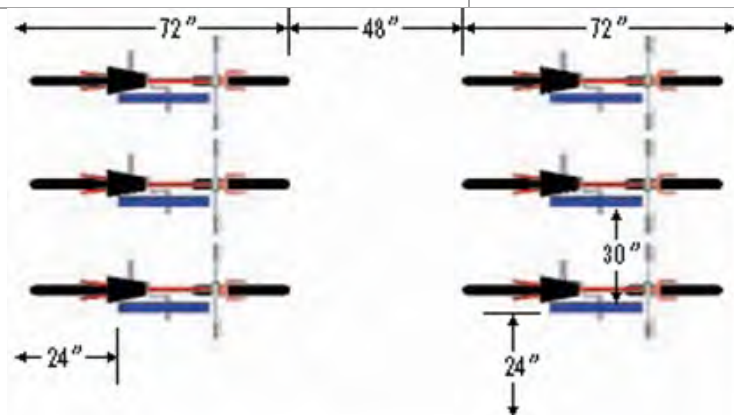


TRAILS & AT DESIGN GUIDELINES



Table D.12 - Design Considerations for Bicycle Racks

Additional Considerations:		
<p>Bicycle racks should not only allow for a secure lock between the bicycle and the rack, but should also provide support for the bicycle frame itself. The rack element should also be designed to resist being cut or detached by common hand tools such as bolt and pipe cutters, wrenches and pry bars which can easily be concealed in backpacks.</p>	N/A	<p>Bicycle racks should not be placed in the following areas:</p> <ul style="list-style-type: none"> • Bus loading areas; • Goods delivery zones; • Taxi zones; • Emergency vehicle zones; • Hotel loading zones; • Within 4.0 m of a fire hydrant; • Within 2.5 m of a driveway or access lane; and • Within 10.0 m of an intersection.



A rack is one or more rack elements joined on a common base or arranged in a regular array and fastened to a common mounting surface.



Sample Bicycle Parking Design Concepts and Applications

Credit: APBP



Bicycle Lockers

Definitions: Bicycle lockers are individual storage units. They are weather-protected, enclosed and operated by a controlled access system that may use keys, swipe card (key fob) or an electronic key pad located on a locker door. Some locker systems are set up for multiple users (i.e. coin operated or secured with personal locks). On average, two standard car parking spaces (of 5.6 m x 2.6 m each) can accommodate 10 individual bicycle locker spaces but this may differ depending on the locker model.

Key Considerations:

- Security and durability are important to consider when selecting a bicycle locker.

Design Alternatives:

- Transparent panels are available on some models to allow surveillance of locker contents;
- Stackable models can double bicycle parking capacity on site;
- Options for customer access can vary from a simple, single-use key system to a multi-user system that allows secure access through smart card technology or electronic key pads;
- Bike Lockers require a level surface, clearance for locker doors and should be located close to building entrances or on the first level of a parking garage and within range of security surveillance. Bicycle Lockers are best placed away from sidewalks and areas with high pedestrian traffic. High quality, durable models should be able to withstand regular use, intense weather conditions and potential vandalism; and
- The installation of lockers and showers at workplaces and educational institutions helps to promote the use of cycling for utilitarian purposes. Businesses or institutions with more than 20 employees commuting by bicycle should be encouraged to offer these facilities.



TRAILS & AT DESIGN GUIDELINES



The graphics below illustrate sample bike box lockers as a potential bicycle parking facility.



Sample Design for Bike Lockers

Credit: www.transportation.ubc.ca (left) and www.winnipegtransit.com (right)



Trail and Active Transportation Guidelines

D-30:

Using the criteria outlined the type of bicycle parking facility, number of available spaces and location should be carefully considered on a site by site basis.

D-31:

The Town and its partners should build upon any infrastructure previously implemented and consider initiating a program to install racks on an as requested basis for destinations throughout the Town.

D.5.5 Bicycle Friendly Catch Basin Cover

Catch basin grates and utility covers are potential obstructions to cyclists, as well as in-line skaters. Therefore, bicycle-safe grates should be used, and grates and covers should be located in a manner which will minimize severe and/or frequent manoeuvring by the cyclist. Catch basin grates with slots parallel to the roadway, or a gap between the frame and the grate, can trap the front wheel of a bicycle, causing loss of steering control. If the slot spacing is wide enough, narrow bicycle wheels can drop into the grates. Conflicts with grates may result in serious damage to the bicycle wheel and frame as well as injury to the cyclist.

Key Considerations:

- When new curbed roadways are constructed or rehabilitated, curb face inlets should be considered to minimize the number of potential obstructions.
- Catch basin grates and utility covers should be placed or adjusted to be flush with the adjacent pavement surface.

These grates should be replaced with bicycle-safe, hydraulically efficient versions. All on-road cycling facilities in urban areas with curb gutter and storm drains should be made bicycle-friendly through the provision of bicycle-friendly catch basin covers. The Region of Niagara has recently adopted a new standard for catch basin covers that is bicycle friendly. The Town of Georgina may want to consider a standard similar to the one used in the Region of Niagara and develop a standard bicycle-friendly catch basin cover.

Trail and Active Transportation Guidelines

D-32:

The Town of Georgina should ensure that all catch basin covers are bicycle-friendly. Catch basin covers on proposed bicycle routes as part of the Town of Georgina Trails and Active Transportation Network should receive priority for adjustments.



D.5.6 Rest and Staging Areas

Rest areas should be provided along routes where users tend to stop, such as interpretative stations, lookouts, restaurants, museums and other attractions / services, which are logical locations for rest areas.

Ideally, there should be a rest area at least every five kilometres on popular rural recreational trails or at major intersections and gathering places near on-road facilities or along sidewalks and boulevard trails.

In urban centres, rest areas should be provided more frequently, and in areas where trail/AT route demand is high such as popular urban trails, trails near seniors' centres, along waterfront promenades etc., opportunities for resting/seating should be much more tightly spaced (e.g. consider intervals of 100 – 250 m).

In addition to seating, a number of other amenities should be considered for rest areas including:

- Tables;
- Washrooms and potable water;
- Waste receptacles;
- Parking for automobiles;
- Information signing complete with mapping; and
- Bicycle parking facilities.

The following graphics illustrate elements which could be considered for implementation along the proposed trail and cycling network within the Town of Georgina.



Pathway Seating & Rest Areas

Credit: Confederation Trail Georgetown PEI, (Left) MMM Group, Caledon Trailway, Palgrave, ON (Right) MMM Group

Trail and Active Transportation Guidelines

D-33:

Rest and staging areas should be provided at strategic locations such as gathering points, attractions and destinations, as well as other locations where cyclists and pedestrian area expected to stop. The Town of Georgina and its partners should work together to identify and implement rest and staging areas where necessary.



D.6 Signing the Trail and Active Transportation Network

The design and construction of the network should incorporate a hierarchy of signs each with a different purpose and message. This hierarchy is organized into a “family” of signs with unifying design and graphic elements, materials and construction techniques. The unified system becomes immediately recognizable by the user and can become a branding element. Generally the family of signs includes:

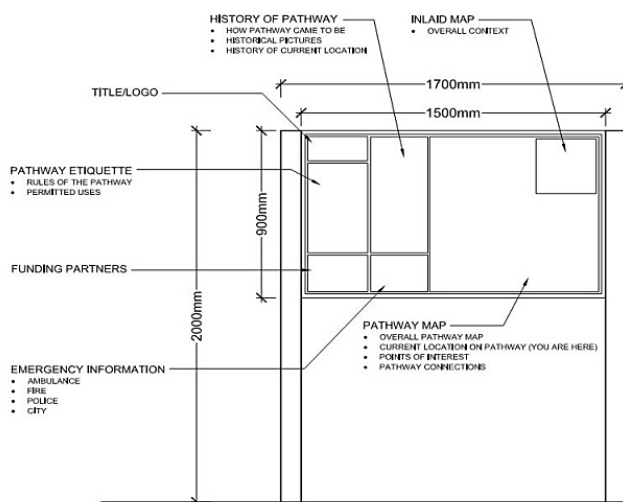
Orientation & Trailheads

Description:

- Typically located at key destination points and major network junctions.
- Provide orientation to the network through mapping, network information and rules and regulations.
- Useful landmark where network nodes are visible from a distance.
- Used as an opportunity to sell advertising space to offset cost of signs.

Guideline: Orientation signs could be considered for implementation when entering the Town or at trail junctions.

Application:



Trailhead Sign Examples

Ottawa, ON (Left)
Credit – MMM Group



User Etiquette

Description:

- Should be posted at public access points to clearly articulate which trail uses are permitted, regulations and laws that apply, as well as trail etiquette, safety and emergency contact information.
- At trailheads, this information can be incorporated into trailhead signs.
- In other areas, this information can be integrated with access barriers.

Guideline: Etiquette signs should be considered for implementation at public access points or where trailheads are located.

Regulatory

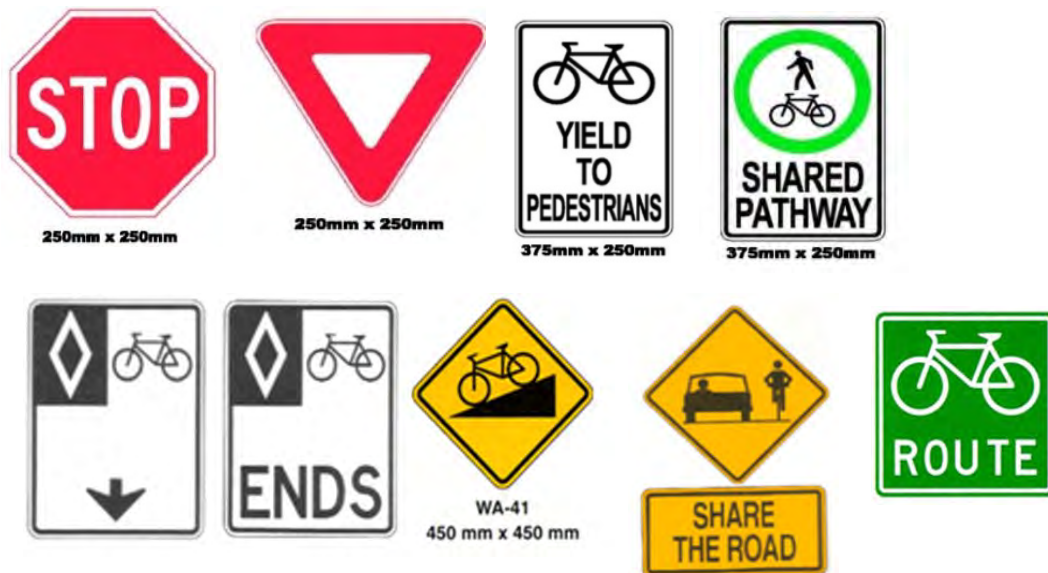
Description:

- Required throughout the system. Where traffic control signs are needed (stop, yield, curve ahead etc.), it is recommended that recognizable traffic control signs be used (refer to the TAB Bikeway Control Guidelines or OTM Book 18).
- Intended to control particular aspects of travel and be used along the road or off-road network.
- Warning signs are used to highlight bicycle route conditions that may pose a potential safety or convenience concern to network users.
- These signs are more applicable to cycling routes and multi-use trails than pedestrian systems.

Guideline: Signs should be considered for implementation along proposed multi-use trails or in locations where conditions may change drastically enough that users should be made aware.



Application:



Examples of Typical Regulatory Sign

Source: OTM Book 18, TAC

Interpretive

Description:

- Should be located at key trail features having a story to be told. These features may be cultural, historical, or natural. Interpretive signs should be highly graphic and easy to read.
- Should be located carefully in highly visible locations to minimize the potential for vandalism.

Guideline: Signs should be implemented throughout the network in locations where cultural or historic information should be highlighted



TRAILS & AT DESIGN GUIDELINES



Application:



Interpretive Sign Examples; Top Left: Erin; MMM; MMM; Bottom Right: Sauble Beach; MMM Group.

Route Marker & Trail Directional

Description:

- Should be located at key network intersections and at regular intervals along long, uninterrupted sections of network.
- Purpose is to provide a simple visual message to users that they are travelling on the pathway network.
- May include the network logo or “brand” and communicate other information to users such as directional arrows and distances in kilometres to major attractions and settlement areas.
- Should be mounted on standard sign poles and be located on all legs of an intersection or off-road trail junction, as well as at gateways.



TRAILS & AT DESIGN GUIDELINES



Guideline: Signs should be considered as part of the overall network to identify a route brand and provide users with directional / wayfinding information.

Application:



Route Marker & Trail Directional Sign Examples - Essex (Left)-Photo Essex Region Conservation Authority; Kissing Bridge Trail, Guelph / Eramosa (Second from left) Photo MMM Group; Halton Hills (Third from Left)-Photo MMM Group; Confederation Trail (Right) Photo MMM Group

ⁱ Canada. Canadian Social Research Links. *Social Development Canada*. Web. Spring 2010. <<http://www.canadiansocialresearch.net/index.htm>>.

ⁱⁱ Canada. Province of Ontario. Ministry of Community and Social Services. *Accessibility for Ontarians with Disabilities Act*. By Ministry of Community and Social Services. 2005. Web. Spring 2010. <<http://www.mcass.gov.on.ca/en/mcass/programs/accessibility/OntarioAccessibilityLaws/2005/index.aspx>>.

ⁱⁱⁱ *Accessibility News*. Trails for All Ontarians Collaborative (TAOC), 2006. Web. Spring 2010. <<http://www.accessibilitynews.ca/cwdo/resources/resources.php?resources=72>>.

Appendix E

Five-Step Implementation Tool



E MASTER PLAN IMPLEMENTATION TOOL

E.1 Implementing the Network – A 5-Step Approach

Error! Reference source not found. illustrates a process tool for guiding the implementation of trail and active transportation facilities in the Town of Georgina. It is recommended that the Inter-Departmental Working Group, review this tool and adapt it as necessary to suit their needs.

The process is comprised of five-parts and is a step-by-step approach to confirm the feasibility of each route recommended in this report at the time implementation is proposed. It is intended to assist Town staff from affected departments to work together, to share information, and to facilitate the implementation of the Master Plan. Changes to policies and the network should be considered through the update of Town Official Plan which is typically conducted every five-years. For segments of the trail and active transportation (AT) network that are under the Region's jurisdiction, the Town of Georgina should work in conjunction with York Region to strive to apply a consistent and integrated implementation process.

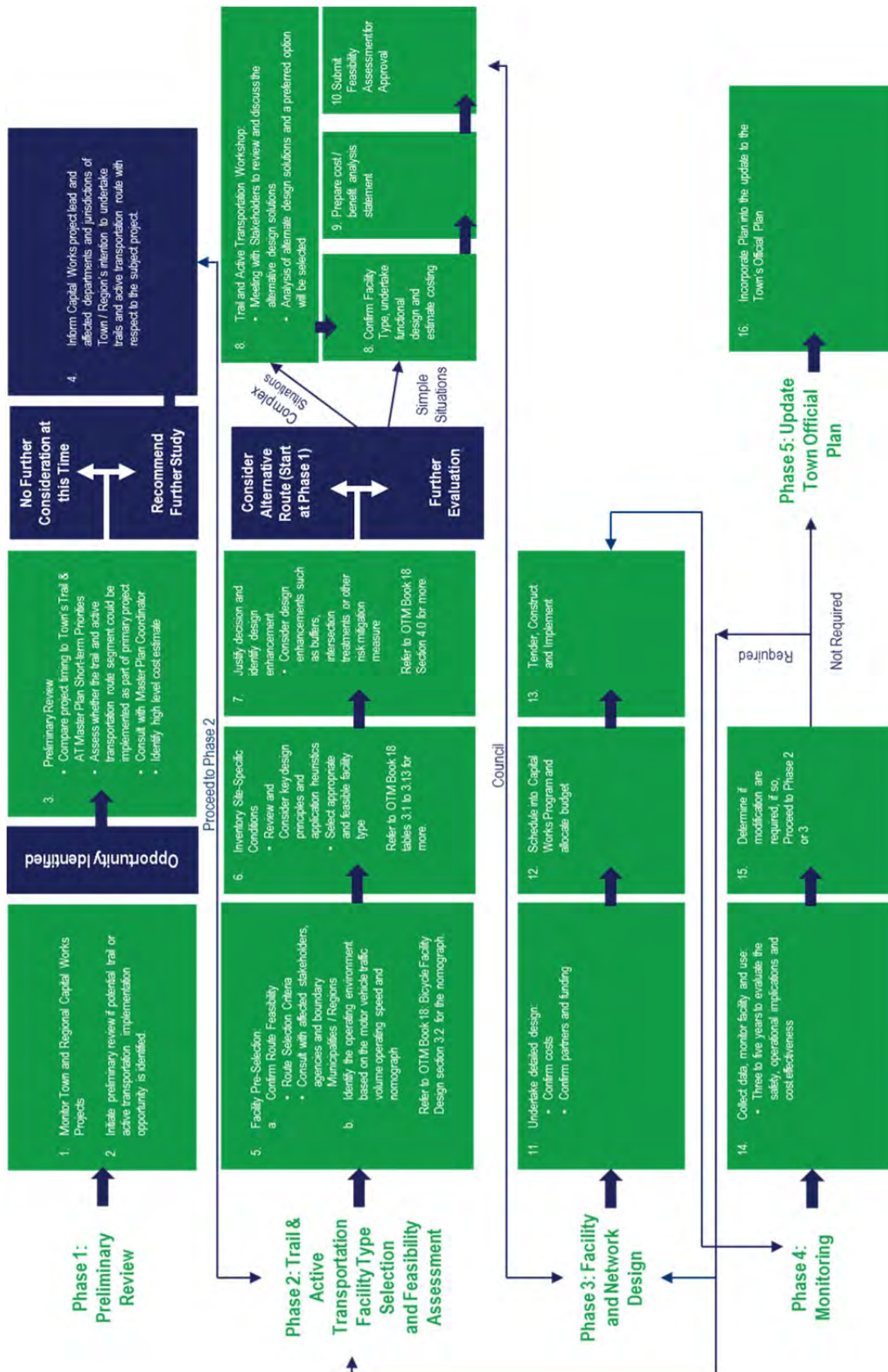


Figure E.1 – Five-Step Implementation Tool for Network Implementation



APPENDIX E



Part I: Preliminary Review

The first step in implementing network segments of the Trail and Active Transportation (AT) Network is to identify and communicate opportunities. As part of the Master Plan all Town and Regional road projects, including capital roads forecast should be monitored by the Inter-Department Working Group.

When a project involving a corridor or road proposed for a trail or AT route identified in the Plan is advanced to the planning stage, or an opportunity to establish a new route not identified in the Plan comes forward, the Working Group lead by the designated Town Staff Lead should undertake a Part 1 Preliminary Review.

This review should:

- Identify the jurisdictions involved in a project;
- Compare the timing of the project to the short and long term implementation priorities identified in the Plan;
- Assess whether the nature of the project may permit implementation of the preferred trail or AT facility in a cost effective manner; and
- Inform the project lead and affected department whether or not a feasibility assessment should be undertaken to confirm the feasibility and costs for implementing the proposed trail or AT route as part of the subject project.

The key aspect of this initial part is communication. Staff from various Town Department (as outlined in Error! Reference source not found.) should report all upcoming projects that may involve or impact a trail or AT facility designated in the Master Plan. From this point forward, the Staff Lead and the Inter-Departmental Working Group, with appropriate technical support when required, would be expected to work through the remaining three parts of the implementation process.

Part II: Feasibility Assessment

If a trail or AT project is confirmed through the preliminary review process (Part I), the Town's Staff Lead should guide and support the Inter-Departmental Working Group in undertaking a Feasibility Assessment. This is intended to be a brief assignment and confirm the feasibility of the route based on a review of the Plan and supporting route selection and planning and design criteria, as well as other relevant information.

- Collect or confirm current roadway characteristic information including AADT volumes, collision data and the commercial vehicle percentage.
- Conduct a field check for both on and/ or off-road route segments to identify any other issues that should be considered and to measure sight line distances (if applicable).
- Undertake a preliminary functional design for the on or off-road trail or AT facility segment and estimate implementation costs, including construction and signing.



- Prepare a cost/ benefit analysis statement. This “statement” should comment on the following:
- The timing for implementing the proposed trail or active transportation facility;
- Costs and efficiencies achieved;
- Identify any less costly alternatives and how they may fit within the overall trail and active transportation network plan;
- Provide recommendation on how to proceed; and
- Submit the Feasibility Assessment to the Staff Lead and Engineering Department Head.

This process may take place in conjunction with, or as input to, a roadway or public works Class EA or functional design process whereby design alternatives are prepared, or as an independent review. It is at this stage that consideration may be given to context sensitive solutions. The design for trail and AT facilities should be in accordance with the Design Guidelines in **Appendix D** of this report, as well as OTM Book 18: Cycling Facilities. The trail and active transportation network phasing should be generally consistent with the strategy outlined in the Trail and AT Master Plan. However, priorities can be adjusted in situations where there is a clear community demand for trail or AT facilities and/or other partners wish to advance a particular route segment. If site-specific circumstances prevent a facility from being constructed in association with a particular road improvement project being considered, other nearby parallel routes on Town or Regional Roads should be closely examined at this time for their suitability. Another possible outcome of the feasibility assessment may be a decision by the Town to introduce an interim facility type in the short term (Phase 1) to get a desirable connection or link in place earlier than proposed in the Plan. An example might be to implement a signed bike route with sharrow pavement markings in the short term and then upgrade to a formal bike lane/ buffered bike lane, paved shoulder or cycle track in the longer term.

Part III: Detailed Design, Tender and Implementation

Once approval has been obtained to implement a trail or active transportation route segment, the necessary detailed design should be completed. This step is typically done as part of the detailed design for the primary capital roads project, such as a road widening and does not require additional resources.

The third part of the process should also include confirming details with regard to partners (if any) and the potential for cost sharing. The project should then be scheduled into the Town Roads Program and suitable budget allocated. The final step involves tendering the project and then construction / implementation.

It is also possible that following detailed design, the decision is made not to proceed with the facility or preferred facility type because of the cost, constraints that arise through the detailed design process or based on direction from Council. If this occurs, the network should be updated and an alternative parallel route should be proposed.



APPENDIX E



Part IV: Monitoring

Once the trail or AT facilities have been constructed, their design and use should be monitored to ensure they function in the manner intended. When necessary, the facilities should also be upgraded and maintained to ensure continued safe use.

Part V: Town and Region Official Plans

The fifth component of the implementation process includes updating the trail and AT network schedule in Town and Region Official Plans as part of regularly scheduled updates.

Appendix F

Unit Cost Summary

Appendix F - Unit Price Schedule
Town of Georgina Trails and Active Transportation Master Plan

ITEM	DESCRIPTION	UNIT	VALUE	COMMENTS/ASSUMPTIONS
1.0 GENERAL ACTIVE TRANSPORTATION FACILITIES				
Shared Lanes / Paved Shoulders				
1.1	Signed Bike Route in Urban Area	linear KM	\$1,500.00	Price for both sides of the road, assumes one sign a minimum of every 330m / direction of travel (e.g. 6 signs / km).
1.2	Signed Bike Route in Rural Area	linear KM	\$1,000.00	Price for both sides of the road, assumes one sign a minimum of every 600m / direction of travel (e.g. 4 signs / km)
1.3	Signed Bike Route with Sharrow Lane Markings	linear KM	\$3,500.00	Price for both sides of the road, includes route signs every 330m (\$1,500/km both sides), and sharrow stencil every 75m as per Ministry Guidelines (Painted \$75 each x 26/km = \$1,950 in table) If thermoplastic type product is used assume \$250 / each x 26 = \$6,500 source Flint Trading Inc.
1.4	Signed Bike Route with Wide Curb Lane with Construction of a New Road	linear KM	\$60,000.00	Price for both sides of the road, assumes 0.5m to 1.0m widening on both sides of the road (3.5m to 4.0m)
1.5	Signed Bike Route with Wide Curb Lane with Road Reconstruction Project	linear KM	\$240,000.00	Price for both sides of the road, includes curb replacement, catch basin adjustments, lead extensions and driveway ramps
1.6	Signed Bike Route with Paved Shoulder in conjunction with existing road reconstruction / resurfacing	linear KM	\$55,000.00	Price for both sides of the road, 1.5m paved shoulder, assumes cycling project pays for additional granular base, asphalt and edge line (assume \$110,000 per kilometre if additional widening of granular base required)
1.7	Signed Bike Route with Buffered Paved Shoulder in conjunction with existing road reconstruction / resurfacing project	linear KM	\$150,000.00	Price for both sides of the road, 1.5m paved shoulder + 0.5 to 1.0m paved buffer, assumes cycling project pays for additional granular base, asphalt, edge lines and signs (buffer zone framed by white edge lines)
1.8	Addition of Rumble Strip to Existing Buffered Paved Shoulder (rural)	linear KM	\$3,000.00	Price for both sides
1.9	Granular Shoulder Sealing	linear KM	\$3,000.00	Both sides spray emulsion applied to harden the granular shoulder. This will reduce gravel on the paved portion of the shoulder and significantly reduce shoulder maintenance.
Conventional and Separated Bike Lanes				
1.10	Conventional 1.5m-1.8m Bicycle Lanes by Adding Bike Lane Markings and Signs	linear KM	\$7,500.00	Price for both sides of the road, includes signs, stencils and edge line. Price is for conventional paint, (assumes painted lane line at \$1 / m + \$75 / symbol x 26 + \$2000 for signs)increase budget to \$20,000 /km for Thermoplastic) e.g. lane line in thermo is \$5.50/m compared to \$1.00/m for paint
1.11	Conventional 1.5m-1.8m Bicycle Lanes through Lane Conversion from 4 lanes to 3 lanes	linear KM	\$35,000.00	Price for both sides. Includes grinding of existing pavement, markings, signs, line painting and symbols
1.12	Conventional 1.5m-1.8m Bicycle Lanes in Conjunction with a New Road or Road Reconstruction Project	linear KM	\$300,000.00	Price for both sides of the road, assumes 1.5m bike lanes on both sides of the roadway (1.5m x 2 sides = 3.0m). Includes catch basin leads, asphalt, signs, pavement markings sub-base only. Road project funds all other improvements
1.13	Conventional 1.5m-1.8m Bicycle Lanes by Retrofitting / Widening Existing Road	linear KM	\$700,000.00	Price for both sides of the road, includes the cost for excavation, adjust catch basins, lead extensions, new curbs/driveway ramps, asphalt and sub-base, pavement markings and signs.
1.14	Wide Bicycle Lane (2.0m - 2.5m BL) in Conjunction with New Road or Road Widening Project	linear KM	\$250,000.00	Price for both sides of the road, assumes 2.0m to 2.5m bike lanes on both sides of the roadway . Includes catch basin leads, asphalt, signs, pavement markings sub-base only
1.15	Buffered Bicycle Lane with Hatched Pavement Markings - Assumes New Road or Road Reconstruction/Widening already Planned	linear KM	\$350,000.00	Price for both sides of the road, assumes 1.5m bike lanes + 0.5m - 1.0m buffer zone with hatched pavement markings on both sides of the roadway. Includes catch basin leads, asphalt, signs, pavement markings sub-base only. Road project funds all other components

Appendix F - Unit Price Schedule

Town of Georgina Trails and Active Transportation Master Plan

1.16	Buffered Bicycle Lane with Flex Bollards - Assumes New Road or Road Reconstruction/Widening Already Planned	linear KM	\$365,000.00	Price for both sides of the road, assumes 1.5m bike lanes + flex bollards centred in hatched buffer zone at 10m intervals. Includes catch basin leads, asphalt, signs, edge line pavement markings (both sides of buffer zone) sub-base only
1.17	Buffered Bicycle Lane with Pre-Cast Barrier - Assumes New road or Road Reconstruction/Widening Already Planned	linear KM	\$400,000.00	Price for both sides of the road, assumes 1.5m bike lanes + pre-cast and anchored curb delineators . Includes catch basin leads, asphalt, signs, edge line pavement markings (both sides of buffer zone) sub-base only
Cycle Tracks				
1.18	Uni-directional Cycle Tracks: Raised and Curb Separated - Retrofit Existing Roadway	linear KM	\$500,000 - \$1,200,000	Both sides. Includes construction but excludes design and signal modifications. Form of cycle track and materials as well as related components such as bike signals, upgrade/modification of signal controllers, utility/lighting pole relocations, bike boxes etc. are project specific and will impact unit price
1.19	Two Way Cycle Track - Retrofit Existing Roadway	linear KM	\$500,000 - \$800,000	One side. Includes construction but excludes design and signal modifications. Form of cycle track and materials as well as related components such as bike signals, upgrade/modification of signal controllers, utility/lighting pole relocations, bike boxes etc. are project specific and will impact unit price
Active Transportation Paths and Multi-Use Trails				
1.20	Two Way Active Transportation Multi-use path within road right-of-way	linear KM	\$250,000.00	3.0m wide hard surface pathway (asphalt) within road right of way (no utility relocations)
1.21	Two Way Active Transportation Multi-use path within road right-of-way on one side with removal of existing sidewalk	linear KM	\$275,000.00	3.0m wide hard surface pathway (asphalt) within road right of way on one side of road in place of 1.5m concrete sidewalk (includes crushing of existing sidewalk and compacting for trail base)
1.22	Concrete Splash Strip placed within road right-of-way between Active Transportation Multi-Use Path and Roadway	m²	\$150.00	Colour Stamped Concrete
1.23	Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (New)	linear KM	\$250,000.00	3.0m wide hard surface pathway (asphalt) within park setting (normal conditions) 90mm asphalt depth
1.24	Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (Upgrade existing granular surface)	linear KM	\$100,000.00	Includes some new base work (25% approx.), half of the material excavated is removed from site. Add trail marker signs
1.25	Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting	linear KM	\$140,000.00	3.0m wide, compacted stone dust surface normal site conditions
1.26	Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Rural Setting (New)	linear KM	\$200,000.00	3.0m wide, compacted stone dust surface in complex site conditions (includes cost of clearing and grubbing)
1.27	Upgrade existing granular surface trail to meet 3.0m wide compacted granular trail standard	linear KM	\$50,000.00	Includes some new base work (25% approx.) and an average of 20 regulatory signs per kilometre
1.28	Off-Road Multi-Use Trail Outside of Road Right-of-Way on Abandoned Rail Bed in a Rural Setting	linear KM	\$130,000.00	3.0m wide, compacted stone dust surface, includes signage along trail and gates at road crossings
1.29	Granular Surfaced Multi-use Trail in a Woodland Setting	linear KM	\$120,000.00	2.4m wide, compacted stone dust surface
1.30	Woodchip Surfaced Off-Road Multi-Use Trail with logs beside the trail and geotextile fabric below the mulch (suitable for trails in areas with moist soils)	linear KM	\$45,000.00	2.0m wide multi-use trail (\$45 / linear metre). Mulch is available from local sources and is supplied free of charge to the municipality (e.g. from park and hydro tree pruning), logs along the side of the trail are available locally and free of charge to the municipality. For instance logs may come from trees that have to be removed to accommodate the trail. Minor grading only is required to level out the trail bed prior to adding the fabric and mulch.

Appendix F - Unit Price Schedule
Town of Georgina Trails and Active Transportation Master Plan

1.31	Woodchip Surfaced Off-Road Multi-Use Trail with no logs and no fabric (suitable for trails in areas with dry soils)	linear KM	\$35,000.00	2.0m wide multi-use trail (\$35 / linear metre). Mulch is available from local sources and is supplied free of charge to the municipality (e.g. from park and hydro tree pruning). Minor grading only is required to level out the trail bed prior to adding the fabric and mulch.
2.0 STRUCTURES AND CROSSINGS				
2.1	Pedestrian Boardwalk (Light-Duty)	linear KM	\$1,500,000.00	Structure on footings, 3.0m wide with railings
2.2	Self weathering steel truss bridge	m²	\$2000 - \$2500	Footings/ abutments additional, assume \$30,000 per side for spread footings; \$50,000 - \$90,000 per side for piles
2.3	Retrofit / Widen Existing Pedestrian / Trail Bridge (29m long, 3m clear width)	m²	\$2,500.00	Price assumes modifications to existing abutments
2.4	Grade separated cycling/overpass of major arterial/highway	each	\$1,000,000- \$8,000,000	Requirements and design vary widely, use price as general guideline only
2.5	Metal stairs with hand railing and gutter to roll bicycle	vertical M	\$3,000.00	1.8m wide, galvanized steel
2.6	Pathway Crossing of Private Entrance	each	\$1500 - \$2000	Adjustment of existing curb cuts to accommodate 3.0m multi-use pathway
2.7	Pathway / Road transition at unsignalized intersection(crossride)	each	\$5,000.00	Typically includes warning signs, curb cuts and minimal restoration (3.0m pathway)
2.8	Pathway / Road transition at existing signalized intersection (crossride)	each	\$25,000.00	Typically includes installation of 4 signal heads, 2 poles, 2 foundations, 2 controller connector and 2 arms.
2.9	At grade mid-block crossing	each	\$5,000.00	Typically includes pavement markings on pathway, warning signs, curb cuts and minimal restoration. Does not include median refuge island.
2.1	Median Refuge	each	\$20,000.00	Average price for basic refuge with curbs, no pedestrian signals
2.11	Mid-block Pedestrian Signal	each	\$75,000-\$100,000	Varies depending on number of signal heads required
2.12	At grade railway crossing	each	\$120,000.00	Flashing lights, motion sensing switch (C.N. estimate)
2.13	At grade railway crossing with gate	each	\$300,000.00	Flashing lights, motion sensing switch and automatic gate (C.N. estimate)
2.14	Below grade railway crossing	each	\$500,000-\$750,000	3.0m wide, unlit culvert style approx. 10 m long for single elevated railway track
2.15	Multi use subway under 4 lane road	each	\$1,000,000-\$1,200,000	Guideline price only for basic 3.3 m wide, lit.

Appendix F - Unit Price Schedule
Town of Georgina Trails and Active Transportation Master Plan

2.16	Retaining Wall	m²	\$600.00	Face metre squared
3.0 BARRIERS AND ACCESS CONTROL FOR MULTI-USE TRAILS OUTSIDE OF THE ROAD RIGHT-OF-WAY				
3.1	Lockable gate (2 per road crossing)	each	\$5,000.00	Heavy duty gates, price for one side of road (2 required per road crossing). Typically only required in rural settings or city boundary areas
3.2	Metal offset gates	each	\$1,200.00	"P"-style park gate
3.3	Removable Bollard	each	\$500-\$750	Basic style (e.g. 75mm diameter galvanized), with footing. Increase budget for decorative style bollards
3.4	Berming/boulders at road crossing	each	\$600.00	Price for one side of road (2 required per road crossing)
3.5	Granular parking lot at staging area (15 car capacity-gravel)	each	\$35,000.00	Basic granular surfaced parking area (i.e. 300mm granular B sub-base with 150mm granular A surface), with precast bumper curbs. Includes minor landscaping and site furnishings, such as garbage receptacles and bike racks.
3.6	Page wire fencing	linear M	\$20.00	1.5m height with peeled wood posts
3.7	Chain link fencing	linear M	\$100.00	Galvanized, 1.5m height
4.0 SIGNAGE				
4.1	Regulatory and caution Signage (off-road pathway) on new metal post	each	\$150-\$250	300mm x 300mm metal signboard c/w metal "u" channel post
4.2	Signboards for interpretive sign	each	\$500-\$800	Does not include graphic design. Based on a 600mm x 900mm typical size and embedded polymer material, up to 40% less for aluminum or aluminum composite panel
4.3	Staging area kiosk	each	\$2,000-\$10,000	Wide range provided. Price depends on design and materials selected. Does not include design and supply of signboards
4.4	Signboards for staging area kiosk sign	each	\$1,500-\$2,000	Typical production cost, does not include graphic design (based on a 900mm x 1500mm typical size and embedded polymer material). Up to 40% less for aluminum or aluminum composite panel
4.5	Pathway directional sign	each	\$500-\$750	Bollard / post (100mm x100mm marker), with graphics on all 4 sides
4.6	Pathway marker sign	each	\$250.00	Bollard / post (100mm x100mm marker), graphics on one side only
4.7	Pathway marker sign	linear KM	\$1,500.00	Price for both sides of the path, assumes one sign on average, per direction of travel every 0.5 km

Appendix F - Unit Price Schedule
Town of Georgina Trails and Active Transportation Master Plan

5.0 OTHER				
5.1	Major rough grading (for multi-use pathway)	m³	\$10-\$25	Varies depending on a number of factors including site access, disposal location etc.
5.2	Clearing and Grubbing	m²	\$2.00	
5.3	Bicycle rack (Post and Ring style)	each	\$150-\$250	Holds 2 bicycles , price varies depending on manufacturer (includes installation)
5.4	Bicycle rack	each	\$1,000-\$1,200	Holds 6 bicycles, price varies depending on manufacturer (includes installation)
5.5	Bicycle Locker	each	\$3,000.00	Price varies depending on style and size. Does not include concrete mounting pad
5.6	Bench	each	\$1000-\$2,000	Price varies depending on style and size. Does not include footing/concrete mounting pad
5.7	Safety Railings/Rubrail	linear M	\$100-\$120	1.4m height basic post and rail style
5.8	Small diameter culvert	linear M	\$150-\$250	Price range applies to 400mm to 600mm diameter PVC or CSP culverts for drainage below trail
5.9	Pathway Lighting	linear M	\$130-\$160	Includes cabling, connection to power supply, transformers and fixtures
5.10	Relocation of Light / Support Pole	each	\$4,000.00	Adjustment of pole offset (distance between pole and roadway)
5.11	Relocation of Signal Pole / Utility Box	each	\$8,000.00	Adjustment of pole offset (distance between pole and roadway)
5.12	Flexible Bollards	each	\$100.00	Should be placed at 10m intervals where required
5.13	Pavement Markings	linear M	\$1.00	

- NOTES:**
- 1. Unit Prices are for functional design purposes only, include installation but exclude contingency, design and approvals costs (unless noted) and reflect 2013 dollars, based on projects in southern Ontario.
 - 2. Estimates do not include the cost of property acquisitions, signal modifications, utility relocations, major roadside drainage works or costs associated with site-specific projects such as bridges, railway crossings, retaining walls, and stairways, unless otherwise noted.
 - 3. Assumes typical environmental conditions and topography.
 - 4. Applicable taxes and permit fees are additional.

Appendix G

Cost Spreadsheet

TABLE G.1 - SUMMARY OF EXISTING AND PROPOSED FACILITY TYPES BY JURISDICTION

EXISTING AND PROPOSED LENGTH OF THE TRAILS AND AT NETWORK BY FACILITY TYPE AND JURISDICTION																	
Jurisdiction	Existing						TOTAL DISTANCE (EXISTING)		Proposed Routes							TOTAL DISTANCE (PROPOSED)	
	Multi-Use Trail	Bike Lane	Paved Shoulder	Signed Route	Edgeline	Sharrow	Total (km)	% of Total Existing	Multi-Use Trail	Bike Lane	Paved Shoulder	Signed Route	Edgeline	Sharrow	Desired Connection (Facility TBD)	Total (km)	% of Total Proposed
	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)			Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)		
Town of Georgina	18.9	0.0	0.0	6.6	0.0	0.0	25.5	22.8%	42.3	0.6	0.0	130.7	5.2	7.22	28.2	214.2	64.0%
Regional Municipality of York	29.7	4.6	47.5	0.0	0.0	0.0	81.8	73.1%	0.0	0.4	38.1	72.2	0.0	0.0	0.0	110.7	33.1%
Ministry of Transportation (Highway 48)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0	7.6	0.0	0.0	0.0	0.0	7.6	2.3%
Ontario Parks	4.7	0.0	0.0	0.0	0.0	0.0	4.7	4.2%	0.4	0.0	0.0	1.8	0.0	0.0	0.0	2.2	0.7%
TOTAL (KM)	53.3	4.6	47.5	6.6	0.0	0.0	111.9		42.6	1.0	45.7	204.7	5.2	7	28.2	334.6	
																TOTAL EXISTING AND PROPOSED DISTANCE (KM)	
TOTAL EXISTING AND PROPOSED TRAILS AND AT NETWORK (KM)																446.5	

TABLE G.2 - SUMMARY OF PROPOSED FACILITY TYPES BY JURISDICTION FOR EACH PHASE

PROPOSED LENGTH OF THE TRAILS AND AT NETWORK BY FACILITY TYPE AND JURISDICTION FOR EACH PHASE									
Jurisdiction	Phase 1 (0-5 Years)						TOTAL DISTANCE FOR PHASE 1		
	Multi-Use Trail	Bike Lane	Paved Shoulder	Signed Route	Edgeline	Sharrow	Total (km)	% of Phase 1	
	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)			
Town of Georgina	9.5	0.6	0.0	54.2	3.7	7.0	75.0	57.4%	24.5%
Regional Municipality of York	0.0	0.4	7.5	45.6	0.0	0.0	53.5	41.0%	17.5%
Ministry of Transportation (Highway 48)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0%
Ontario Parks	0.4	0.0	0.0	1.8	0.0	0.0	2.2	1.6%	0.7%
TOTAL FOR PHASE 1	9.8	1.0	7.5	101.6	3.7	7.0	130.6		42.6%
	Phase 2 (6-10 Years)						TOTAL DISTANCE FOR PHASE 2		
	Multi-Use Trail	Bike Lane	Paved Shoulder	Signed Route	Edgeline	Sharrow	Total (km)	% of Phase 2	
	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)			
Town of Georgina	25.8	0.0	0.0	64.9	1.6	0.2	92.5	76.5%	30.2%
Regional Municipality of York	0.0	0.0	8.9	19.5	0.0	0.0	28.3	23.5%	9.2%
Ministry of Transportation (Highway 48)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0%
Ontario Parks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0%
TOTAL FOR PHASE 2	25.8	0.0	8.9	84.4	1.6	0.2	120.8		39.4%
	Phase 3 (11-20+ Years)						TOTAL DISTANCE FOR PHASE 3		
	Multi-Use Trail	Bike Lane	Paved Shoulder	Signed Route	Edgeline	Sharrow	Total (km)	% of Phase 3	
	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)			
Town of Georgina	7.0	0.0	0.0	11.6	0.0	0.0	18.6	33.8%	6.1%
Regional Municipality of York	0.0	0.0	21.8	7.1	0.0	0.0	28.9	52.4%	9.4%
Ministry of Transportation (Highway 48)	0.0	0.0	7.6	0.0	0.0	0.0	7.6	13.8%	2.5%
Ontario Parks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0%
TOTAL FOR PHASE 3	7.0	0.0	29.3	18.7	0.0	0.0	55.0		18.0%
TOTAL FOR PHASE 1, PHASE 2 & PHASE 3	TOTAL DISTANCE FOR PHASE 1, PHASE 2 & PHASE 3						TOTAL DISTANCE (KM) FOR PHASE 1, PHASE 2 & PHASE 3		
	Multi-Use Trail	Bike Lane	Paved Shoulder	Signed Route	Edgeline	Sharrow			
	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)	Distance (km)			
	42.6	1.0	45.7	204.7	5.2	7.2	306.4		



TOWN OF GEORGINA TRAILS AND AT MASTER PLAN
FIGURE G.1
SUMMARY OF EXISTING AND PROPOSED FACILITY TYPES BY
JURISDICTION AND ALL PHASES



FINAL MAY 2014

TABLE G.3 - PROPOSED FACILITY TYPE AND COST BY PHASE AND JURISDICTION

Facility Type	PHASE 1 (0-5 YEARS)											
	Unit Price	Unit Value	Proposed Cost by Jurisdiction								Total Distance for Phase 1 (KM)	Total Estimated Cost for Phase 1
			Town of Georgina		Regional Municipality of York		Ministry of Transportation (Highway 48)		Ontario Parks			
			Distance (KM)	Estimated Cost	Distance (KM)	Total Cost	Distance (KM)	Total Cost	Distance (KM)	Total Cost		
Multi-Use Trail												
Two Way Active Transportation Multi-use path within road right-of-way	\$250,000.00	linear KM	4.9	\$1,217,500.00	0	\$0	0	\$0	0	\$0	4.9	\$1,217,500.00
Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (New)	\$250,000.00	linear KM	2.6	\$647,500.00	0	\$0	0	\$0	0.4	\$97,500	3.0	\$745,000.00
Two Way Active Transportation Multi-use path within road right-of-way on one side with removal of existing sidewalk	\$275,000.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Woodchip Surfaced Off-Road Multi-Use Trail with logs beside the trail and geotextile fabric below the mulch (suitable for trails in areas with moist soils)	\$45,000.00	linear KM	0.0	\$0.00	0	\$0	0	\$0	0	\$0	0	\$0
Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Rural Setting (New)	\$200,000.00	linear KM	2.0	\$408,000.00	0	\$0	0	\$0	0	\$0	2.0	\$408,000.00
Bike Lane	\$7,500.00	linear KM	0.6	\$4,590.00	0.4	\$2,888	0	\$0	0	\$0	1.0	\$7,477.50
Paved Shoulder	\$55,000.00	linear KM	0	\$0	7.5	\$411,950.00	0	\$0	0	\$0	7.5	\$411,950.00
Proposed Signed Bicycle Route	\$1,500.00	linear KM	54.2	\$81,315.00	45.6	\$68,400.00	0	\$0	1.8	\$2,651	101.6	\$152,365.50
Proposed Signed Route with Edgeline	\$4,000.00	linear KM	3.7	\$14,600.00	0	\$0	0	\$0	0	\$0	3.7	\$14,600.00
Proposed Signed Route with Sharrow	\$3,500.00	linear KM	7.0	\$24,500.00	0	\$0	0	\$0	0	\$0	7.00	\$24,500.00
Off-Road Connection between Shoreline Place and Metropolitan Crescent identified in the Lake to Lake Cycling Route and Walking Trail Feasibility and Design Study Volume 2 Report (June 2013)			-	\$207,100.00	-	-	-	-	-	-	-	\$207,100.00
Maskinonge River Pedestrian Bridge Crossing cost identified in Appendix III from Report No. OED-2013-0023 Environmental Assessment for the Maskinonge River Pedestrian Bridge¹			-	\$1,209,775.40	-	-	-	-	-	-	-	\$1,209,775.40
PHASE 1 TOTAL			75.0	\$3,814,880.40	53.5	\$483,237.50	0	\$0	2.2	\$100,150.50	130.6	\$4,398,268.40
Facility Type	PHASE 2 (6-10 YEARS)											
	Unit Price	Unit Value	Proposed Cost by Jurisdiction								Total Distance for Phase 1 (KM)	Total Estimated Cost for Phase 1
			Town of Georgina		Regional Municipality of York		Ministry of Transportation (Highway 48)		Ontario Parks			
			Distance (KM)	Estimated Cost	Distance (KM)	Total Cost	Distance (KM)	Total Cost	Distance (KM)	Total Cost		
Multi-Use Trail												
Two Way Active Transportation Multi-use path within road right-of-way	\$250,000.00	linear KM	7.0	\$1,760,000.00	0	\$0	0	\$0	0	\$0	7.0	\$1,760,000.00
Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (New)	\$250,000.00	linear KM	8.2	\$2,060,000	0	\$0	0	\$0	0	\$0	8.2	\$2,060,000
Two Way Active Transportation Multi-use path within road right-of-way on one side with removal of existing sidewalk	\$275,000.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Woodchip Surfaced Off-Road Multi-Use Trail with logs beside the trail and geotextile fabric below the mulch (suitable for trails in areas with moist soils)	\$45,000.00	linear KM	0.7	\$29,295.00	0	\$0	0	\$0	0	\$0	1	\$29,295.0
Granular Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Rural Setting (New)	\$200,000.00	linear KM	9.9	\$1,978,000.00	0	\$0	0	\$0	0	\$0	9.9	\$1,978,000.0
Bike Lane	\$7,500.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.0
Paved Shoulder	\$55,000.00	linear KM	0	\$0	9	\$488,400.00	0	\$0	0	\$0	8.9	\$488,400.00
Proposed Signed Bicycle Route	\$1,500.00	linear KM	64.9	\$97,350.00	19.5	\$29,175.00	0	\$0	0	\$0	84.4	\$126,525.00
Proposed Signed Route with Edgeline	\$4,000.00	linear KM	1.6	\$6,200.00	0	\$0.00	0	\$0	0	\$0	1.6	\$6,200.00
Proposed Signed Route with Sharrow	\$3,500.00	linear KM	0.2	\$759.50	0	\$0	0	\$0	0	\$0	0.2	\$759.50
PHASE 2 TOTAL			92.5	\$5,930,845.00	28.3	\$517,575.00	0	\$0	0	\$0	120.8	\$6,449,179.50
Facility Type	PHASE 3 (11-20+ YEARS)											
	Unit Price	Unit Value	Proposed Cost by Jurisdiction								Total Distance for Phase 1 (KM)	Total Estimated Cost for Phase 1
			Town of Georgina		Regional Municipality of York		Ministry of Transportation (Highway 48)		Ontario Parks			
			Distance (KM)	Estimated Cost	Distance (KM)	Total Cost	Distance (KM)	Total Cost	Distance (KM)	Total Cost		
Multi-Use Trail												
Two Way Active Transportation Multi-use path within road right-of-way	\$250,000.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00
Hard Surfaced Off-Road Multi-Use Trail Outside of Road Right-of-Way in an Urban Setting (New)	\$250,000.00	linear KM	7.0	\$1,738,250	0	\$0	0	\$0	0	\$0	7	\$1,738,250.00
Two Way Active Transportation Multi-use path within road right-of-way on one side with removal of existing sidewalk	\$275,000.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00
Woodchip Surfaced Off-Road Multi-Use Trail with logs beside the trail and geotextile fabric below the mulch (suitable for trails in areas with moist soils)	\$45,000.00	linear KM	0.0	\$0.00	0	\$0	0	\$0	0.0	\$0	0.0	\$0.00
Bike Lane	\$7,500.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Paved Shoulder	\$55,000.00	linear KM	0	\$0	22	\$1,196,250.00	8	\$416,900	0	\$0	29.3	\$1,613,150.00
Proposed Signed Bicycle Route	\$1,500.00	linear KM	11.6	\$17,455.50	7	\$10,657.50	0	\$0	0	\$0	18.7	\$28,113.00
Proposed Signed Route with Edgeline	\$4,000.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Proposed Signed Route with Sharrow	\$3,500.00	linear KM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
PHASE 3 TOTAL			18.6	\$1,755,705.50	28.9	\$1,206,907.50	7.6	\$416,900.00	0	\$0	55.0	\$3,379,513.00
			Town of Georgina		Regional Municipality of York		Ministry of Transportation (Highway 48)		Ontario Parks		Total Distance for all Phases and Jurisdictions¹	Total Estimated Cost for all Phases and Jurisdictions
			Total Distance for all Phases	Total Estimated Cost for all Phases²	Total Distance for all Phases	Total Estimated Cost for all Phases	Total Distance for all Phases	Total Estimated Cost for all Phases	Total Distance for all Phases	Total Estimated Cost for all Phases		
TOTAL FOR PHASE 1, PHASE 2 & PHASE 3			186.1	\$11,501,430.90	110.7	\$2,207,720.00	7.6	\$416,900.00	2.2	\$100,150.50	306.4	\$14,226,960.90
PROMOTION AND MARKETING STRATEGY			Short Term (0-5 Years)		Medium Term (6-10 Years)		Long Term (10-20+ Years)					Total Estimated Cost
			Unit Cost	Estimated Cost	Unit Cost	Estimated Cost	Unit Cost	Estimated Cost				
Developing a Trails & AT Map				\$35,000.00		\$25,000.00		\$25,000.00		\$85,000.00		
				\$10,000.00		\$10,000.00		\$10,000.00		\$30,000.00		
Develop Mobile Bike Valet for Events				\$20,000.00		\$10,000.00		\$10,000.00		\$40,000.00		
				\$2,500.00		\$25,000.00		\$25,000.00		\$52,500.00		
Develop Safety Campaign				\$67,500.00		\$70,000.00		\$70,000.00		\$207,500.00		
				\$67,500.00		\$70,000.00		\$70,000.00		\$207,500.00		
PROGRAM TOTAL				Total Short Term		Total Medium Term		Total Long Term		Total 20+ Year Investment		
				\$4,465,768.40		\$6,519,179.50		\$3,449,513.00		\$14,434,460.90		

1. Phase 1 includes the Maskinonge River Pedestrian Bridge cost in the Class EA of \$1,209,775.40
2. Estimated Town cost of \$11,501,430.90 (for all three phases) would be reduced through the following:
· Developer funded on and off-road trail segments.
· York Region Municipal Partnership Funding (e.g. Lake to Lake Cycling Route and Walking Trail).
· Economies of scale reducing costs from implementing on-road projects when roads are scheduled for resurfacing.
3. The total distance for all phases and jurisdiction of the proposed Trail & AT network does not include 27.2 kilometres of desired connections as the facility types of desire lines is to be determined.

The per capita cost to implement the proposed Town of Georgina Trials and Active Transportation network is estimated to be less than \$14 per person, per year (see calculations below)

Total Implementation Cost for the Town of Georgina	
(Total Estimated Cost for all Phases + Total Estimated Cost for Promotion and Marketing Strategy):	\$11,708,930.90
Population of the Town of Georgina	43,517 +

Estimated cost of the Trails and AT Network per person in Georgina

\$269

Estimated cost of the Trails and AT Network per person per year (over 20 years)

\$13.45

Appendix H

Performance Measures

Appendix H - Preliminary Performance Measures

Performance Measure	Indicator		Data Source	Location of Monitoring Activity	Frequency of Measurement	Baseline Information	Target
	Definition	Measurement					
Engineering							
Use	Existing Users	% of all Trips AADT cyclists for key corridors Distance travelled to use trail # residents within 2.5km radius of trails % children walk or bike to school % residents who commute by bike or walking % elderly residents who walk or cycle Duration of AT or trail trip	Traffic Counts TTS Data Census Data (2011)	Town-wide High-volume corridors Trail heads	Annual or Bi-annual Review		
Provisions	Building the Network	Km cycling facilities added Km trail facilities added	GIS Database & Tracking Tool	Town-wide	On-going through implementation Annual Reporting		
	End-of-Trip Facilities	# of bike rack spaces per 100Kresidents. # trail or route signs # amenities for trail facilities # long-term parking facilities (bikes) # trail access points / staging areas	GIS Database & Tracking Tool On-site survey	Town-wide	On-going inventory Annual or Bi-annual Review		
Investment	Municipal Funding	\$ investment in cycling and trail / 1000 residents	Town Budget Reports	Town-wide	Annual		
Comfort & Convenience	Winter Ploughing along Trails and Bike Lanes	% bike network ploughed	Operations & Engineering monitoring (internal survey)	Town-wide	High volume snow falls		
	Town-wide Destinations	# key town destinations found along the proposed route	Inter Departmental Working Group	Town-wide	Bi-annually		
Education & Encouragement							
Partnerships & Recognition	Supporting Events & Businesses	# events organized for trail and cycling promotion	Recreation & Culture (internal survey) Inter Departmental Working Group Trails and Active Transportation Advisory Committee	N/A	Bi-annually		
	External Recognition	Bicycle Friendly Community Status	Recreation & Culture or Operations & Engineering	N/A	Annually		
Outreach & Provision	Educational Materials Provided	Availability / # of maps distributed Creation of cycling specific newsletters Creation of educational brochures Consistency of mapping to existing facilities and signage	Town and Region Executive Services Inter Departmental Working Group Trails and Active Transportation Advisory Committee	Town-wide	Bi-annually		

Appendix H - Preliminary Performance Measures

Performance Measure	Indicator		Data Source	Location of Monitoring Activity	Frequency of Measurement	Baseline Information	Target
	Definition	Measurement					
Public Engagement	Opportunities for Public Involvement	# of engagement opportunities	Inter Departmental Working Group		Annually		
	Educational Programs Implemented	# education or training opportunities # schools participating in cycling education program	Trails and Active Transportation Advisory Committee		Bi-annual		
	Cycling and Trail Coverage in Media	# media cover opportunities regarding cycling or trails linked to the master plan			Ongoing		
	Cycling Website Views	# of hits from Georgina based IP address to Regional webpage	Corporate Services Executive Services Statistics on web traffic		Ongoing		
	Community Support	# of trail or cycling clubs / 1000 residents	Trails and Active Transportation Advisory Committee Inter-Departmental Working Group		Bi-annually		
	Tourism	# people who come to Georgina for cycling or trails \$ amount / tourist spent	York Region Tourism Executive Services Inter-Departmental Working Group		Annually or Bi-annually		
Enforcement							
Safety	Safety of Cyclists	# reported cyclist collisions, injuries and fatalities # fatalities / 10,000 cyclists	York Regional Police Annual Report	Town-wide Key corridors / intersections	Annual Collision Reports Every 5 years		
	Safety of Trail Users	# reported incidents along trails	Municipal By-law Enforcement Executive Services	Town-wide Key trail linkages	By-law Reports review annually or bi-annually		
	Share the Road Campaign Promotion and Enforcement	# of campaigns undertaken # of events attended	York Regional Police Service	Town-wide	Annual		
Citations & Ticketing	Police Services Cycling Citations	# positive reinforcement tickets distributed sidewalk cycling tickets issued drivers ticketed for unsafe share the road practices (e.g. obstructing bike lanes, not passing safely)	York Regional Police Service	Town-wide	Annual Police Reports Annual program wrap-up		

Appendix I

Summary of Recommendations



I SUMMARY OF RECOMMENDATIONS

The recommendations summarized in Appendix I have been organized based on the sequence that they occur in the master plan. As a means of increasing efficiency the study team has identified in the phase in which the recommendation is intended to commence. The following legend should be consulted as the recommendations are reviewed:

- Short-term recommendations
- Medium-term recommendations
- Long-term recommendations





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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
4-1: Consider using the Route Rationalization Tool when future updates or alterations are made to the trails and AT network or when opportunities arise.	4-13	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> • Inter-Departmental Working Group • Trails & Active Transportation Advisory Committee • Project Specific External Stakeholders 	
		On-Road Design & Development - Operations & Engineering			
4-2: The three step facility selection tool, as identified in OTM Book 18 should be utilized when identifying the preferred on or off-road facility for a proposed linkage in the trail and active transportation network	4-20	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> • Inter-Departmental Working Group • Trails and Active Transportation Advisory Committee • Select Stakeholders (on a project by project basis) 	
		On-Road Design & Development - Operations & Engineering			
4-3: The guidelines prepared as part of the Trails and Active Transportation Master Plan (Appendix D) are intended to inform the detailed design and construction of trail and active transportation facilities and should be referenced in coordination with OTM Book 18, OTM Book 15, the TAC Bikeway Control Guidelines and the Provincial Built Environment Standards.	4-20	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> • Trails & Active Transportation Coordinator • Trails & Active transportation Facility Maintenance Lead • Inter-Departmental Working Group 	
		On-Road Design & Development - Operations & Engineering	*Additional Funds allocated for Coordinator Position		

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
4.4: The Town recognizes that the trails and active transportation network will change over time as new opportunities offered by unopened road allowances, hydro right-of-ways, abandoned rail corridors, open space and future roadway improvements become available. Potential changes to the networks arising from these opportunities should be evaluated on an on-going basis and the Master Plan updated in a timely and responsive manner.	4-20	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Coordinator Inter-Departmental Working group Trails & Active Transportation Advisory Committee External Stakeholders (on a project by project basis) 	
		On-Road Design & Development - Operations & Engineering	*Additional Funds allocated for Coordinator Position		
5.1: When next updated, the Town's Official Plan should be reviewed to ensure that policies are included which address trails and active transportation and that they are consistent with the policies and recommendations found in the Trails and Active Transportation Master Plan. The Town should consider making specific reference to the network mapping as a schedule.	5-2	Future OP Updates: Planning & Building Services	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Coordinator Inter-Departmental Working group Trails & Active Transportation Advisory Committee 	
		Town-wide Implementation: Recreation & Culture Lead / Operations & Engineering Lead	*Additional Funds allocated for Coordinator Position		
5.2: Continue to explore and implement land-use planning initiatives and policies which support active transportation, a mixed-use, high density community development approach and continues to promote active transportation friendly streetscapes as well as off-road connections through public and private spaces.	5-3	Lead from Department of Operations and Engineering	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Recreation and Culture Department Select Trails & Active Transportation Advisory Committee members 	



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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.3: Continue to improve connections to off-road trail facilities on both public and private lands and to use trails as a way to promote active transportation and recreation throughout the Town.	5-5	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Coordinator Inter-Departmental Working group Trails & Active Transportation Advisory Committee Surrounding Municipalities 	
		On-Road Design & Development - Operations & Engineering	* Additional funds allocated for Coordinator Position		
5.4: The Town should collaborate with York Region, York Region Public Health and school boards to apply a school travel planning approach and active and safe routes to school programming within the Town or build on existing programs/initiatives already being undertaken by local boards.	5-5	Trails & Active Transportation Coordinator & York Region Public Health	Existing Municipal Resources or Additional Funding gathered from External Sources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Inter-Departmental Working Group Safe Routes to School Program York Region Public Health and School Boards Operations & Engineering Department 	
5.5: The Town should integrate and link public transit stops or future major commuter transit connections to the on and off-road system of trails and active transportation facilities.	5-5	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Inter-Departmental Working Group Local and Regional Transit Providers 	
		On-Road Design & Development - Operations & Engineering	* Additional funds allocated for Coordinator Position		

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.6: Changes to the way trails and active transportation facilities are planned, designed and constructed as part of the development process should be communicated clearly to the development community through an iterative process.	5-7	Lead from Department of Operations and Engineering	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Lead from Recreation & Culture Department Trails & Active Transportation Advisory Committee Trails & Active Transportation Coordinator 	Phase 1
5.7: Consideration for and development of updates to the Development Charges By-law to include trail and active transportation facilities as eligible infrastructure when the Town next undertakes an update to their By-law.	5-7	Town Planning and Building	Existing Municipal Resources	<ul style="list-style-type: none"> Lead from Recreation & Culture Department 	Phase 2
5.8: The four levels of public and stakeholder consultation should be used as a guide to facilitate consultation when individual trail and active transportation projects are being implemented.	5-9	Trails & Active Transportation Coordinator or	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee 	Phase 3
		Off-road Design & Development – Recreation & Culture			
		On-Road Design & Development - Operations & Engineering			



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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.9: The Town should examine the potential to use unopened road allowances and abandoned roads as potential routes prior to disposing of them.	5-10	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Coordinator Inter-Departmental Working group Trails & Active Transportation Advisory Committee External Stakeholders (on a project by project basis) 	
		On-Road Design & Development - Operations & Engineering	* Additional funds allocated for Coordinator Position		
5.10: Consider developing a municipal policy to consider utilizing utility corridors in the urban and rural areas to establish off-road trails and active transportation routes where practical and feasible.	5-10	Lead from Department of Operations and Engineering	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Coordinator Inter-Departmental Working group Trails & Active Transportation Advisory Committee 	
5.11: Develop a strategy to secure public access for Trail and AT routes that are identified on land currently in private ownership or under the ownership of local public partners (e.g. York Region, Lake Simcoe Region Conservation Authority, Province of Ontario, etc.)	5-10	Trails & Active Transportation Coordinator or	Existing Municipal Resources or	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee 	
		Off-road Routes – Recreation & Culture	External funding opportunities		
		On-Road Routes - Operations & Engineering	* Additional funds allocated for Coordinator Position		

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.12: Partnerships should be explored with York Region, York Tourism, York Region Public Health, York Regional Police Service, School Boards, Share the Road Cycling Coalition and local clubs and interest groups to develop and implement a trail and AT education program	5-25	Trails & Active Transportation Coordinator with York Region Public Health	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Share the Road Coalition Lake Simcoe Region Conservation Authority York Region Police Service 	
5.13: The Town should work with York Region Public Health, School Boards and LSRCA to develop and deliver educational programming related to trails and active transportation.	5-25	Trails & Active Transportation Coordinator or Lead from Department of Recreation & Culture	Existing Municipal Resources or External funding opportunities * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Operations & Engineering Department Lead 	
5.14: The Town, in partnership with York Region Public Health, School Boards and York Tourism should develop and distribute educational materials such as hard copy newsletters, posters, mapping and promotional materials as well as on-line educational tools and social media messaging geared towards users of all ages and abilities including but not limited to “how-to” guides for safe activities.	5-25	Trails & Active Transportation Coordinator or Lead from Department of Recreation & Culture	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Operations & Engineering Department Lead 	



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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.15: Develop a wayfinding strategy for on and off-road routes in the Town of Georgina. The strategy would help users navigate the network and inform them about key destinations Town-wide. The Town would also partner with the Region to develop a Regional strategy to ensure continuity and connectivity between the municipalities.	5-25	Trails & Active Transportation Coordinator or Lead from Department of Recreation & Culture	Existing Municipal Resources or External funding opportunities * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Operations & Engineering Department Lead York Region 	
5.16: A community based social marketing program geared towards the delivery of marketing and encouragement of active transportation and cycling, as well as reduced automobile should be explored and developed by the Town based on the steps identified in the section above.	5-26	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> York Tourism Operations & Engineering Department Lead Recreation & Culture Department Lead Trails & Active Transportation Advisory Committee 	
5.17: Work with municipal employees to develop internal programming to promote the use of more sustainable forms of transportation for utilitarian purposes.	5-26	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Representatives from all Town Departments 	
5.18: Work with local employers and interest groups to identify potential incentive programs or supportive infrastructure which could help to decrease the use of single occupant vehicles for commuting and increase active transportation and recreation.	5-26	Lead from Department of Operations and Engineering	Existing Municipal Resources and support from Town employers	<ul style="list-style-type: none"> Trails & Active Transportation Coordinator Trails & Active Transportation Advisory Committee Local Employers 	

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.19: Work with the Trails and Active Transportation Advisory Committee to develop a bike valet pilot project – Encouragement Pilot Project - at a key public event with the goal of expanding it into a mobile bike parking initiative. The valet parking would be coordinated by the committee and supported by volunteer efforts.	5-26	Trails & Active Transportation Coordinator or Lead from Department of Operations & Engineering	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee York Region Police Service Local Volunteers Local Shops 	Phase 1
5.20: Work with the Trails and Active Transportation Advisory Committee, local employers, businesses and representatives from key community destinations to develop a bike parking strategy to help promote trails and active transportation Town-wide. The strategy will be based on a range of design alternatives identified in Appendix C as well as guidelines included in OTM Book 18.	5-26	Trails & Active Transportation Coordinator or	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee 	Phase 2
		Off-road Design & Development – Recreation & Culture			
		On-Road Design & Development - Operations & Engineering			
5.21: Using the GIS information developed for the Trails and Active Transportation Master Plan, the Town should explore the design and development of a trails and active transportation map – Education pilot project. Using the steps identified, the Town should move to develop the map for promotion and tourism purposes which can be printed in hard copy and put online. Collaborate with York Region to develop a Regional scale trail and guide map.	5-26	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Lead from Department of Operations & Engineering Lead from Department of Recreation & Culture York Tourism 	Phase 1

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.22: Work with the York Regional Police to develop and implement the enforcement pilot project - a Share the Road Safety Campaign similar to the one developed for Halton Region – Safely Sharing Halton's Roadway campaign with specific initiatives targeted to the Town of Georgina.	5-26	Trails & Active Transportation Coordinator	Existing Municipal Resources or External funding opportunities * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Share the Road Coalition York Region Public Health York Region Police Service 	
5.23: Enforcement activities of the York Regional Police should be supplemented by local by-law enforcement for issues relating to sidewalks, cycling, misuse of cycling facilities and trails and other network amenities. Where the jurisdiction changes, enforcement should be made the responsibility of the conservation authority.	5-27	Lead from Department of Operations and Engineering	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Lead from Department of Recreation & Culture York Region Police Service 	
5.24: Initiate the evaluation pilot project by confirming a set of performance measures which can be used to monitor and evaluate trail and active transportation use, maintenance and conditions. In partnership with the Region the Town is encouraged to explore trail counter technology or a short duration count program to gather input.	5-27	Lead from Department of Operations and Engineering	Existing Municipal Resources	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Lead from Department of Recreation & Culture 	
5.25: Undertake a detailed review of existing Town guidelines regarding on-road and off-road facility maintenance.	5-27	Trails & Active Transportation Coordinator or	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee 	
		Off-road Maintenance – Recreation & Culture			
		On-Road Maintenance - Operations & Engineering			

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.26: Conduct a regular (annual) review of physical infrastructure conditions with input from facility users. Report findings to the Inter-Departmental Working Group as part of the process for establishing priorities for on-going maintenance of the trail and active transportation network.	5-28	Trails & Active Transportation Coordinator or	Existing Municipal Resources	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee 	
		Off-road Review – Recreation & Culture	* Additional funds allocated for Coordinator Position		
		On-Road Review - Operations & Engineering	Or Volunteer Based (Community Service Hours)		
5.27: Annual maintenance budgets should be refined to fully accommodate the maintenance of on-road and off-road trail and active transportation facilities. The budgets should increase over time to correspond with the increase in the number / length of facilities that have been implemented.	5-28	Off-road Maintenance – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Trails & Active Transportation Coordinator 	
		On-Road Maintenance - Operations & Engineering			



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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
5.28: The Town of Georgina, through the Inter-Departmental Working Group, should consult on a project by project basis as required with affected agencies	5-28	Trails & Active Transportation Coordinator or	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee External Stakeholders (on a project by project basis) Utility Providers Ministry of Transportation Ontario 	
		Off-road Design & Development – Recreation & Culture			
		On-Road Design & Development - Operations & Engineering			
5.29: Consider the adoption the maintenance recommendations outlined in Appendix C of OTM Book 18: Cycling Facilities.	5-28	Off-road Maintenance – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee 	
		On-Road Maintenance - Operations & Engineering			
5.30: The proposed risk management and liability prevention strategies should be reviewed and incorporated into day to day decision making processes when implementing the Trails and Active Transportation Master Plan Update.	5-30	Off-road Liability – Recreation & Culture	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Trails & Active Transportation Coordinator 	
		On-Road Liability - Operations & Engineering			

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
6.1: The 20+ year implementation plan included in the master plan should be adopted in principle and used to guide the implementation of the network over time.	6-4	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources or External funding opportunities	<ul style="list-style-type: none"> • Inter-Departmental Working group • Trails & Active Transportation Advisory Committee • Trails & Active Transportation Coordinator • Lake Simcoe Region Conservation Authority • Ontario Parks • York Region 	
		On-Road Design & Development - Operations & Engineering			
6.2: The implementation and development of the trails and active transportation network should be coordinated with the capital works plan developed by the Town and York Region (for those Regional Roads which form part of the Trails and AT network).	6-4	Off-road Design & Development – Recreation & Culture	To be Determined – Subject to Annual and Forecasted Capital Budget Processes	<ul style="list-style-type: none"> • Inter-Departmental Working group • Trails & Active Transportation Advisory Committee • Trails & Active Transportation Coordinator • Lake Simcoe Region Conservation Authority • Ontario Parks • York Region 	
		On-Road Design & Development - Operations & Engineering			
6.3: The proposed organization structure including the roles and responsibilities should be adopted as a guide for the implementation of the master plan and should be used when identifying department leads on a project by project basis.	6-10	Trails & Active Transportation Coordinator or Trails & Active Transportation Advisory Committee	Existing Municipal Resources	<ul style="list-style-type: none"> • Lead from Department of Operations and Engineering • Lead from Department of Recreation and Culture 	



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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
6.4: Identify an existing staff member who will oversee the transition between the finalization of the master plan and the implementation of initial projects / initiatives. This staff member will hold the role of a trails and active transportation coordinator. In addition to overseeing the master plan's implementation they will also provide updates to internal and external stakeholders as necessary.	6-10	Lead from Department of Operations and Engineering	Existing Municipal Resources	<ul style="list-style-type: none">Lead from Department of Operations and Engineering	1
6.5: Once the master plan has been adopted the Town is encouraged to identify a lead staff member from the engineering and operations department and the recreation and culture department to hold the positions of on and off-road design and development leads.	6-10	Off-road Design & Development – Recreation & Culture On-Road Design & Development - Operations & Engineering	Existing Municipal Resources	<ul style="list-style-type: none">Inter-Departmental Working groupTrails & Active Transportation Advisory CommitteeTrails & Active Transportation Coordinator	
6.6: The on and off-road design and development leads will be supported by a representative from the engineering and operations department who will be responsible for the maintenance of both on and off-road systems and facilities.	6-10	Lead from Department of Operations and Engineering	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none">Inter-Departmental Working groupTrails & Active Transportation Advisory CommitteeTrails & Active Transportation Coordinator	2
6.7: An inter-departmental working group made up of representatives from each of the Town's departments should be established. The working group will help to inform the decision making process for the plan's implementation.	6-10	Department Leads from Operation & Engineering and Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none">Lead from Department of Operations and EngineeringLead from Department of Recreation and Culture	3

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
6.8: The inter-departmental working group should develop a terms of reference and should meet regularly (i.e. quarterly or more frequently if required) to provide updates on the implementation of the plan and to address next steps.	6-10	Department Leads from Operation & Engineering and Recreation & Culture	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee External Stakeholders (on a project by project basis) 	1
6.9: A trails and active transportation advisory committee should be established once the master plan has been adopted. The advisory committee will be made up of key town and regional stakeholders.	6-11	Trails & Active Transportation Coordinator or Department Leads from Operation & Engineering and Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee LSRCA Ontario Parks School Board Representatives Service Groups 	
6.10: A terms of reference should be prepared for the trails and active transportation advisory committee. It is recommended that the group meet on a regular basis (e.g. quarterly) to review and discuss the implementation of the plan and provide input to the selection of priority projects.	6-11	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Inter-Departmental Working group External Stakeholders (on a project by project basis) 	2
6.11: As a project moves forward the trails and active transportation advisory committee should explore the possibility of engaging additional external stakeholders as necessary. For example should an opportunity arise in a provincial park the committee will be encouraged to engage the Lake Simcoe Region Conservation Authority for additional input.	6-11	Trails & Active Transportation Advisory Committee	Existing Municipal Resources	<ul style="list-style-type: none"> Lead from Department of Operations and Engineering Lead from Department of Recreation and Culture External Stakeholders (on a project by project basis) 	



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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
6.12: The GIS database developed during the preparation of the master plan should be integrated with the Town's existing GIS database and regularly updates as part of network tracking, management and budgeting during the implementation of the master plan.	6-12	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Lead from Department of Operations & Engineering Lead from Department of Recreation & Culture 	
6.13: The updated GIS database should be used to develop a trails or active transportation map geared towards tourism / community branding for the Town.	6-12	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Lead from Department of Operations & Engineering Lead from Department of Recreation & Culture York Tourism 	
6.14: The updated GIS database should be provided to the Region to update their Regional cycling map or other tourism / promotional materials with mapping included on it.	6-12	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Lead from Department of Operations & Engineering Lead from Department of Recreation & Culture York Region York Tourism 	
6.15: The inter-departmental working group should review and consider the use of the five-step implementation tool when undertaking the next steps to develop components of the trails and active transportation master plan.	6-13	Trails & Active Transportation Coordinator	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee Lead from Department of Operations & Engineering Lead from Department of Recreation & Culture 	

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
6.16: The Trails & AT Master Plan should be reviewed and given consideration when town or regional roads (identified in the Town's trails and active transportation master plan and the Region's pedestrian and cycling master plan) and other capital infrastructure projects are identified and scheduled.	6-13	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> • Inter-Departmental Working group • Trails & Active Transportation Advisory Committee • Trails & Active Transportation Coordinator 	Phase 1
		On-Road Design & Development - Operations & Engineering	* Additional funds allocated for Coordinator Position		
6.17: The proposed network phasing illustrated in Maps 6.1 and 6.2 should be used as the Town's primary reference when addressing network implementation. The map can also be used as a tracking tool over the course of the implementation process to document those routes which have been developed.	6-14	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> • Inter-Departmental Working group • Trails & Active Transportation Advisory Committee • Trails & Active Transportation Coordinator 	Phase 1
		On-Road Design & Development - Operations & Engineering			
6.18: The short-term initiatives identified in Table 6.3 and illustrated on Maps 6.1 and 6.2 should be used to guide implementation during the first five years of the master plan's implementation.	6-22	Off-road Design & Development – Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> • Inter-Departmental Working group • Trails & Active Transportation Advisory Committee • Trails & Active Transportation Coordinator • LSCRA • Surrounding Municipalities (where necessary) 	Phase 1
		On-Road Design & Development - Operations & Engineering			

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Recommendation	Pg. #	Responsibility	Funding	Potential Partners	Phase
6.19: The inter-departmental working group and the trails and active transportation advisory committee should review the hierarchy of staging areas and should refine it as necessary and adopt it as they move forward with the design and implementation of staging areas Town-wide..	6-24	Inter-Departmental Working group with Trails & Active Transportation Advisory Committee	Existing Municipal Resources	<ul style="list-style-type: none"> Lead from Department of Operations & Engineering Lead from Department of Recreation & Culture 	
6.20: To implement the short-term priorities (projects identified in the first 0 – 5 years), the Town of Georgina should budget a total of \$4,465,768.40 (see Table 6.5) over the first 5 years. This translates to \$893,153.68 per year or \$13.45 / person / year assuming a municipal population of 43,517 (Statistics Canada 2011 Census data).	6-28	Off-road Budgeting – Recreation & Culture	Existing Municipal Budgets	<ul style="list-style-type: none"> Inter-Departmental Working group Trails & Active Transportation Advisory Committee Other Applicable Town Departments 	
		On-Road Budgeting - Operations & Engineering			
6.21: In addition to capital funding, the Town should consider and explore other outside funding sources and cost-sharing opportunities for the implementation of the trails and active transportation network, outreach and promotion programs.	6-29	Trails & Active Transportation Coordinator or Department Leads from Operation & Engineering and Recreation & Culture	Existing Municipal Resources * Additional funds allocated for Coordinator Position	<ul style="list-style-type: none"> Trails & Active Transportation Advisory Committee York Tourism York Region Public Health 	
6.22: As part of creating a performance monitoring plan for the Master Plan, the Town should review the preliminary performance measures described in Appendix H. These should be used to confirm a Town-wide set of measures to evaluate the success of the Plan, and to monitor trends in usage.	6-32	Department Leads from Operation & Engineering and Recreation & Culture	Existing Municipal Resources	<ul style="list-style-type: none"> Trails & Active Transportation Coordinator Trails & Active Transportation Advisory Committee York Region Police Service 	