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Acknowledgements

Thank you to those who participated in the many community consultation sessions held to gain feedback on recreational trails and trail amenities in Selwyn Township. Together you provided a strong community voice and provided great local context for this Plan.

Special thank you to the members of Council who participated in the consultation sessions, providing valuable feedback and guidance. Through your adopted Strategic Plan you established a goal to "Foster a healthy, engaged and connected community". This Recreational Trails Master Plan is a significant step forward to accomplish this goal.

Thank you to the Township of Selwyn Adhoc Trails Committee members who helped to guide the development of this Plan. Your passion for trails and trail development has created a comprehensive Plan that will connect and enhance our community for years to come.

Township of Selwyn Adhoc Trails Committee Members

- · Councillor Sherry Senis Committee Chair
- Ruth Kuchinad B.E.L Rotary Vice Chair
- Councillor Donna Ballantyne
- Bruce Bellchambers Lakefield Trail Stewardship Committee
- Yvonne Spradbrow Walking Enthusiast
- · Bob Spearman Trail Enthusiast
- David Wells Trail Enthusiast
- John Sellars, Manager of Recreation Services
- · Angela Chittick, Clerk
- Meaghan McGowan, Community Development Intern

This plan was prepared by PLANbyDESIGN, landscape architects & urban planners, 8 Peter Street South, Suite 202, Orillia, ON, L3V 5A9.

"An enterprising community is one that is informed, engaged and future orientated. It converts information and learning into knowledge and capitalizes on the strengths of the area, turning these into competitive advantages and employment opportunities. It requires leadership, empowerment, creativity and innovation."

Peter Kenyon







Part One

Creating the Recreational Trails Master Plan

1.0 Introduction to the Project 1.1 Why a Recreational Trails Master Plan?
2.0 Selwyn Trails Today 2.1 Township of Selwyn
3.0 Public Consultation 3.1 Collecting Resident & Trail User Input
4.0 Key Trails Related Issues 4.1 Trail Issues-Township of Selwyn
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1.0 Introduction to the Project

1.1 Why a Recreational Trails Master Plan?

A Township-wide Recreational Trails Master Plan can provide many direct, as well as indirect, benefits to the community and surrounding County and City. More importantly, connected trails and bicycle routes support a physically active and healthy lifestyle. This helps to create a higher quality of life and in turn can be a significant factor in attracting new residents and visitors to the area. Although improved health and quality of life are the most predominant reasons for a Recreational Trails Master Plan, a well-developed and connected trails system can offer many other benefits to a community.

1.2 Benefits of a Complete Trails & Bicycle System

Public Health: Increasing the opportunities for walking and cycling not only leads to an increase in physical activity levels but can also reduce the reliance on cars. This lowers the health risks associated with obesity and other conditions such as heart disease, certain forms of cancer and Type-2 diabetes. Emerging research shows that a lack of physical activity is also associated with mental health issues, including depression.

Safety: Well-designed trail networks can greatly improve pedestrian and cyclist safety. The overall performance and safety of the transportation network can be improved through measures such as; traffic calming, streetscape improvements, traffic speed reductions, and vehicle restrictions. The safety benefits generated by these improvements not only apply to pedestrians and cyclists, but also to drivers.

Environmental Protection: Trails and bicycle routes are used by 'self-propelled' forms of transportation and generate significantly less air pollution than others, particularly single occupant vehicles.

Economic and Financial: The development and maintenance costs relating to trails and bicycle route infrastructure are lower than other transportation infrastructure. There is also evidence to support an increase in economic development and tourism associated with well-designed trails and bicycle networks.



"There comes . . . a longing never to travel again except on foot."

— Wendell Berry, Remembering

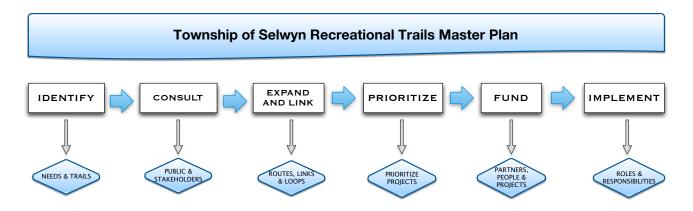




1.3 Project Description

The Township of Selwyn Recreational Trails Master Plan was prepared with support and direction provided by the Township of Selwyn Ad-Hoc Trails Committee and through consultation with the community. This plan provides a framework to guide future decisions regarding recreational trails in the Township of Selwyn.

The plan identifies the need for trail development and provides recommendations concerning key issues, while at the same time presenting strategic priorities for implementing trail improvements over the long-term. Suggestions for government funding sources, as well as recommendations for an education/marketing strategy to promote trail use are outlined in the plan. The process followed to prepare this study is highlighted below.



The plan makes recommendations to improve trails and pedestrian infrastructure throughout the Township. This has been accomplished by **identifying** key issues, **connecting** multiple destinations and establishing an interconnected municipal trail **network** linking neighbouring trail systems. **Leveraging** opportunities for partnerships, and strategically **building** a complete trail system will also play a prominent role in the success of the Recreational Trails Master Plan.

Identify

Connect

Network

Leverage

Build





1.4 Project Objectives

Identify It

Use local community knowledge to understand the key issues and identify trail development opportunities, which can assist in creating a walkable, accessible and bicycle-friendly community.

Connect It

Identify destinations requiring increased pedestrian and/or cycling links and identify the safest and most efficient way to connect them with pedestrian and cycling infrastructure.

Network It

Make pedestrian and cycling infrastructure a visible part of the Township by promoting hiking and cycling through clear signage, wayfinding, and delineated paved shoulders for cyclists.

Leverage It

Establish partnerships and work with neighbourhood/community interest groups and multiple levels of government to encourage and support local walking and cycling initiatives.

Build It

Develop an implementation strategy for trail projects that access available resources and ensure trail linkages are completed, shoulders along bike routes are paved, and that proper signage is posted.

> "Every trip begins and ends as a pedestrian trip — whether walking to a bus stop or across a parking lot to your car."





2.0 Selwyn Trails Today

2.1 Township of Selwyn

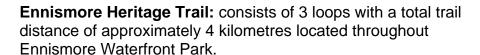
The Township of Selwyn is located in Central Ontario in the County of Peterborough, approximately 100 kilometres from the Greater Toronto Area (GTA). The southeast portion of the Township borders the City of Peterborough and boasts many local attractions and events that enhance the quality of life for residents and tourists alike. Thousands of tourists visit the Township each year to enjoy the beautiful lakes, parks, and recreation facilities. Popular activities in the Township include: fishing, camping, snowmobiling, cross country skiing, boating, golfing, hiking and more. The Township of Selwyn includes the communities of Bridgenorth, Ennismore, Lakefield, Buckhorn and Young's Point.



2.2 Existing Recreational Trails

Selwyn provides over 13 kilometres of asphalt, limestone and natural surface trails.

Lakefield Millennium Trail: is approximately 5 kilometres in length and was completed late in 2000 as a community Millennium project; the trail connects to the Trans Canada Trail via the Peterborough County Rotary Trail.



B.E.L Rotary Bridgenorth Trail: completed in 2010, the trail is approximately 2.3 kilometres in length and runs from Brumwell Street to the 5th Line.

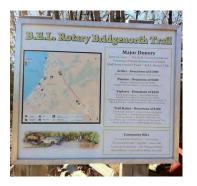
Miller Creek Wildlife Area Trail: a 1.5 kilometre trail through meadows overlooking the Miller Creek Wildlife Area, that is excellent for bird and amphibian watching.

Selwyn Conservation Area Trail: located on the north-east shore of Chemong Lake, this 29 hectare property offers a variety of hiking experiences in a natural setting.

Trans Canada Trail: A section of the Trans Canada Trail located within the Township of Selwyn is approximately 3.5 km in length. It is located on a former railway bed on Crown land. This section of the Trans Canada Trail connects to the Lakefield Millennium Trail via the Peterborough County Rotary Trail.









Gannon's Narrows, Conservation Area Trail: The Gannon's Narrows Conservation Area is 12.5 hectares in size, and occupies 396+ metres of undeveloped shoreline along Pigeon Lake. The area is a mix of open water marsh, upland hardwood forest, and cedar thicket/woods. The property is owned and managed by the Otonabee Region Conservation Authority (ORCA) for environmental protection and passive recreation, which includes a number of informal trails.

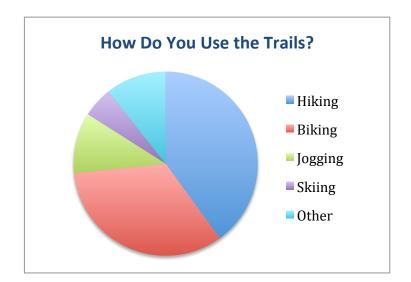
3.0 Public Consultation

3.1 Collecting Resident & Trail User Input

An important component of the Recreational Trails Master Plan was public consultation and working closely with the Ad-Hoc Trails Committee, Municipal Staff and Council. The involvement of the public was essential in creating the plan and drew upon local knowledge of trails from the users themselves. Internal and external consultation efforts, (public surveys, open houses, targeted meetings, etc.) were designed to obtain meaningful input regarding the existing and proposed trails network, key issues, partners, priorities, and final recommendations.

Public consultation revealed that many residents recognize the benefits of trails and generally support municipal investment to build and improve trails. The results also suggested that residents could be encouraged to use trails more often if there was a more interconnected network. Information collected provided some particularly useful information including:

- Common types of trail use;
- Existing obstacles to hiking and biking;
- Priorities for important trail connections and projects;
- Important destinations and/or points of interest.



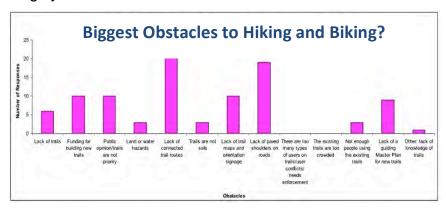




3.2 Public Consultation Findings

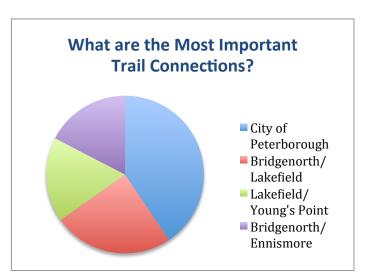
Types Of Trail Use / Obstacles to Hiking and Biking

In terms of trail use, hiking and biking ranked highest with jogging, cross-country skiing, and other trail uses ranking lower. The most significant obstacle to trail usage was a lack of connected trail routes, while a lack of paved shoulders for the safe operation of bicycles on roads was also highly ranked.



Public Consultation Findings Priorities for Trail Connections

The proposed trail linkage that ranked highest were those to the City of Peterborough, while linking the other hamlets was evenly ranked amongst the public.



Public Consultation Findings - Important Destinations and/or Points of Interest:

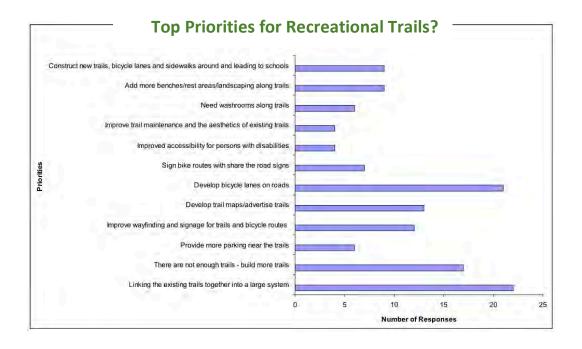
Schools, parks and recreation areas, parking, look-out points, conservation areas, washrooms, rest areas, clinics, and commercial areas, were all noted as important destinations. Specific points of interest within the Township included Lakefield Beach, Miller Creek Wetland, and the Drumlins/Eskers.





Public Consultation Findings - Priority Trails Projects

Connected trail routes and paved shoulders for bicycle use were identified as the top priorities for recreational trails within the Township of Selwyn





"There is no power for change greater than a community discovering what it cares about."

- Peter Kenyon





4.0 Key Trails Related Issues

4.1 Trails Issues – Township of Selwyn

Through meetings with the Ad-Hoc Trails Committee, the general public and staff; trail related

issues within the Township were identified. Connecting existing trails, as much as possible, through off-road routes was ranked as the number one concern. It was also identified that paved shoulders on main cycling road routes was a key requirement. Also of interest to residents is connecting the Township's hamlets and villages, connecting to the City of Peterborough, and completing specific trail improvement projects.

Identify It

Use local community knowledge to understand the key issues and identify trail development opportunities, which can assist in creating a walkable, accessible and bicycle-friendly community.

4.2 The Top 10 List - Identified by residents of the Township of Selwyn

- 1. Trail connections are needed between population centres and hamlets within the Township of Selwyn;
- 2. Trail connections are needed between neighbouring communities, the City of Peterborough ranks highest of those;
- 3. Investment for trail improvements are needed including; dog waste stations, wayfinding signage and maps, rest areas, and garbage receptacles;
- 4. Paved shoulders are necessary for safe cycling in the Township of Selwyn, on major bicycle routes;
- 5. Connect existing trails, with off-road opportunities when/where feasible;
- 6. Celebrate and champion local hiking and biking advocates and volunteers and local trail events;
- 7. Install trail map signs in prominent trail locations;
- 8. Use 'share the road' signs and low posted speeds on popular roads for walking, Seventh Line between Bridgenorth and Lakefield is a priority;
- 9. Continue investing in the existing Lakefield, Ennismore and Bridgenorth trails;
- 10. Install wayfinding and directional signs to identify and promote trails.







5.0 Developing the Township of Selwyn Trails Network

The final recreational trails network will consist of hiking trails, on and off-road bicycle routes, and multiuse trails. Recommendations in the plan will focus on completing missing links in the existing trail network, ensuring accessibility requirements are met, identifying opportunities for new off-road hiking trails and multiuse trails and required trail improvements. The guidelines and principles provided in the plan will ensure the Township is able to provide pedestrian and bicycle friendly neighbourhood design well into the

Connect It

Identify destinations requiring increased pedestrian and/or cycling links and identify the safest and most efficient way to connect them with pedestrian and cycling infrastructure.

future. The following process was used to develop and refine the final Recreational Trails Master Plan network recommended in the Recreational Trails Master Plan.

- Complete inventory of existing trails and conditions using mapping and reports from the Township which identified existing or planned trails, walking routes, cycling routes, and short/long term development areas.
- 2. Develop and use route selection guiding principles, established to assist in selecting routes for the trail network.
- 3. Consultation with the Ad-Hoc Trails Committee, key stakeholders and interested members of the public to receive feedback on existing trails, user needs, and potential trail routes.
- 4. Develop a network of potential routes to be examined and considered for inclusion in the final recreational trail network.
- 5. Network analysis included discussion with the committee, residents, staff and analysis of aerial imagery and field investigation.
- 6. Recommend facility types for each of the on and offroad trail routes and linkages.
- 7. Review and consult with the Ad-Hoc Trails Committee and public to receive feedback on the recommended network and trail facility typologies.
- 8. Finalize the recreational trails network, trail typologies, and a phasing strategy based on feedback from the committee, staff and interested members of the public.







5.1 Route Development and Selection Principles

The following list of guiding principles was used to select the preferred trails and bicycle routes for the Township of Selwyn Recreational Trails Master Plan.

Key Issues: Preferred trails and bicycle routes should help address the key issues identified during the public consultation portion of this study, specifically:

- Connect existing trails, off-road as much as possible;
- Connect the Hamlets and Village areas in the Township of Selwyn;
- Connect to neighbouring communities, City of Peterborough ranks highest;
- Include trail improvements such as signage, dog waste stations, rest areas, and garbage receptacles;
- Include paved shoulders for safe cycling along major bicycle routes;

Safety: Preferred trails and bicycle routes should be located along direct and maintained routes. These routes should be signed, and utilize design standards for the steepness of gradient when required, including cross slopes.

Visibility: Preferred trails and bicycle routes should visually connect to other transportation infrastructure, including sidewalks, and be integrated into roadway cycling space.

Linkages: Preferred trails and bicycle routes should be located in areas that connect existing trails, destinations, and communities.

Multiple User Types: Preferred trails and, where possible, bicycle routes should provide opportunities that allow multiple types of users (walkers, cyclists, runners, etc.) to use the same trail, avoiding separation.

Convenience/Comfort: Preferred trails and bicycle routes should include rest areas, points of interest, and major destinations at regular intervals.

Accessibility: Preferred trails and bicycle routes should be accessible when and where feasible. Accessibility and universal design will be a primary consideration in any new trails or park development and will meet the requirements of the AODA's Design of Public Spaces regulation.

Network It

Make pedestrian and cycling infrastructure a visible part of the Township by promoting hiking and cycling through clear signage, wayfinding, and delineated paved shoulders for cyclists.





5.2 Inventory of the Trails

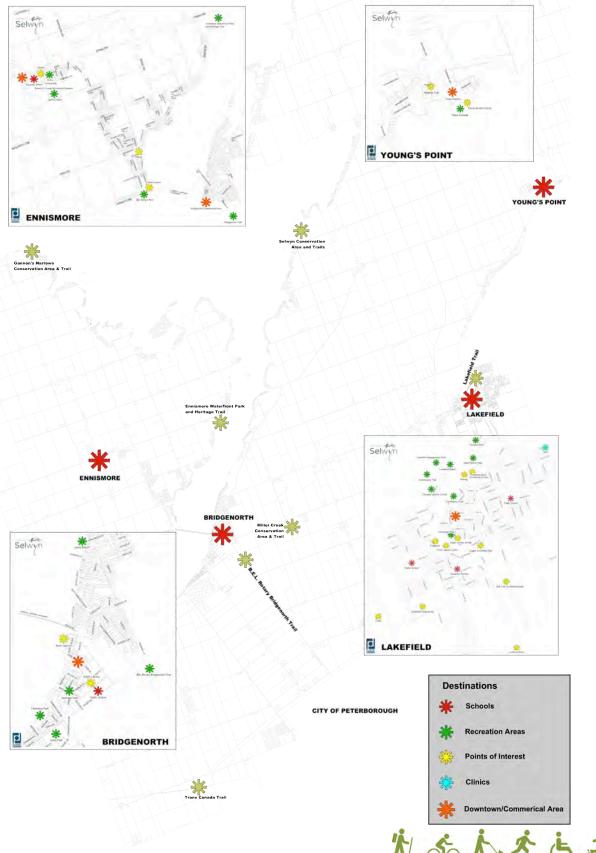


Township of Selwyn – Existing Trails





5.3 Identifying Local Destinations Appendix A

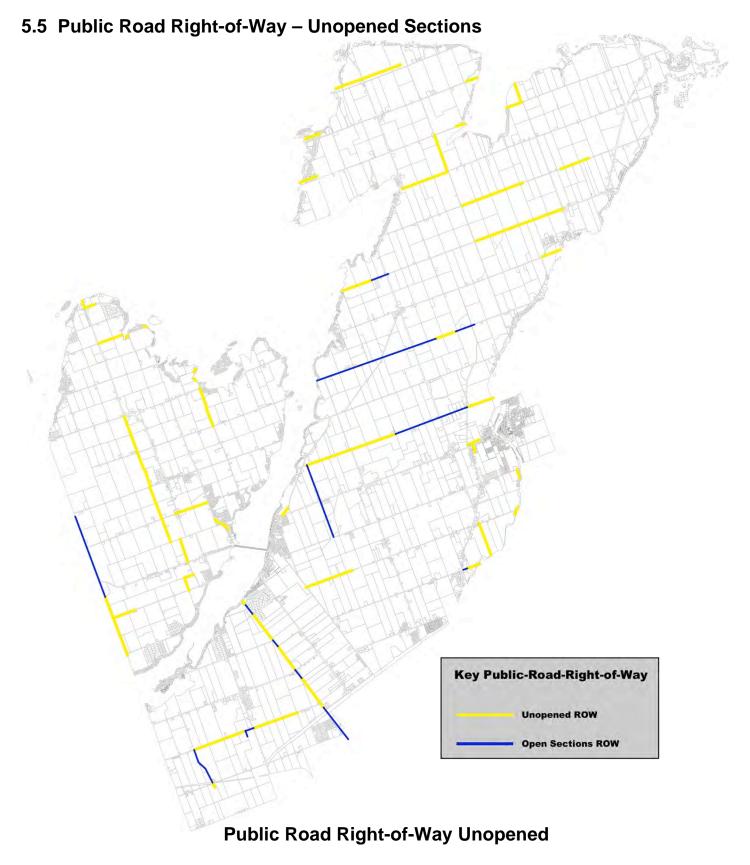






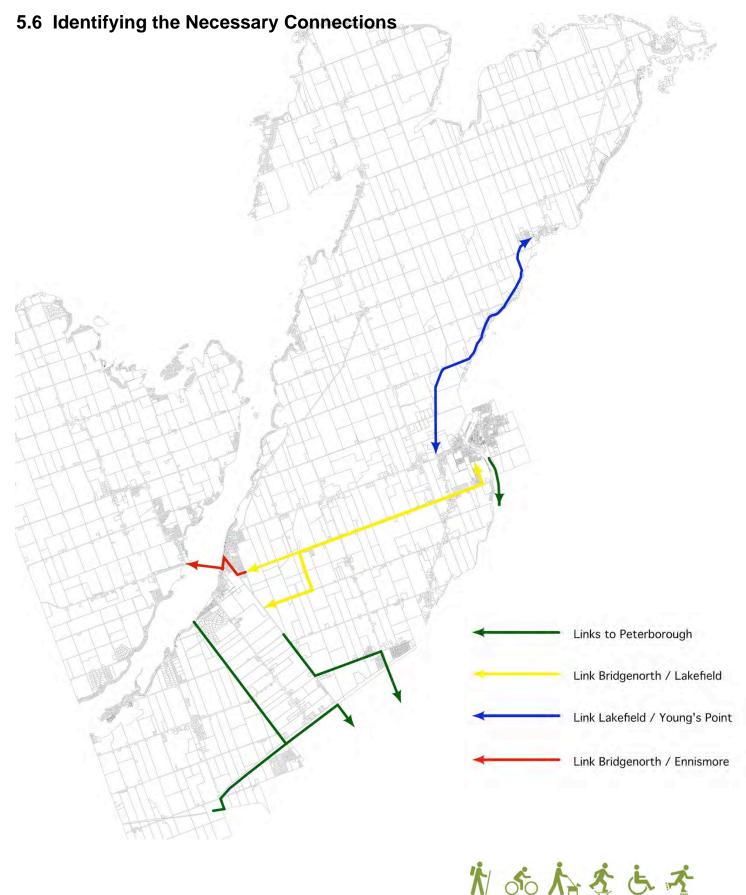














5.7 Putting it all Together - Ennismore

On Road Bicycle Routes - Paved Shoulders / Bike Route Signage

Ennis Road – Unopened ROW (west of Tara Rd), to eastern Ennismore Trail Entrance.

Brick Road - Donoghue Crescent, to Listowel Line

Listowel Line / Viner Line - Township Gravel Pit, to Telford Drive

Tara Road - Yankee Line, to Gannon's Narrows Conservation Area & Gannon's Narrows Trail

Peregrine Road - Dalhaven Road, to Yankee Line

Robinson Road - Yankee Line, to Edenderry Line

Glenpatrick Crescent - Robinson Road, to Alexander Drive

Sidewalk - 1.8m wide Concrete

Robinson Road - Yankee Line, to Ennis Road

Ennis Road – Robinson Road to Unopened ROW (west of Tara Rd)

Alexander Drive – Glenpatrick Crescent, to Brick Road (private easement required)

Off Road Trails - Gravel Surface 1.8m wide

- A. Unopened ROW Ennis Road, to Viner Line
- B. Unopened ROW Tara Road, to Robinson Road
- C. Viner Line Unopened ROW dead end to gravel pit entrance
- D. Ennismore Heritage Trail (detailed design required)
- E. Robert E. Young Recreation Complex and adjacent 54 acres (Crough Lands) (detailed design required)

Off Road Trails - Paved Surface 3.0m wide

Waterfront Trail - Chemong Park Trail, to Dalhaven Road (private easement required)

Separated Sidewalk / Bicycle Facility

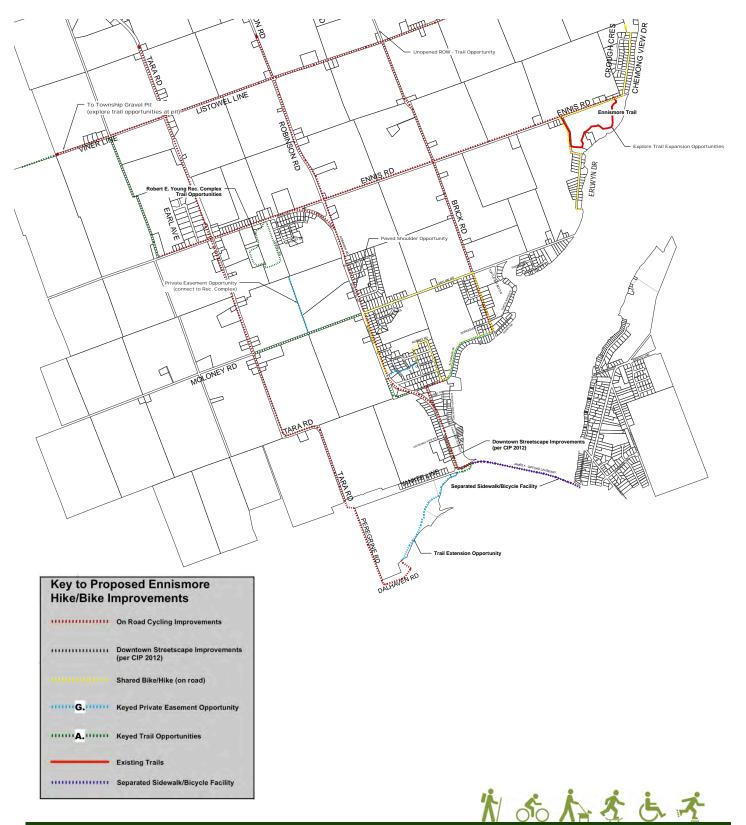
James A. Gifford Causeway





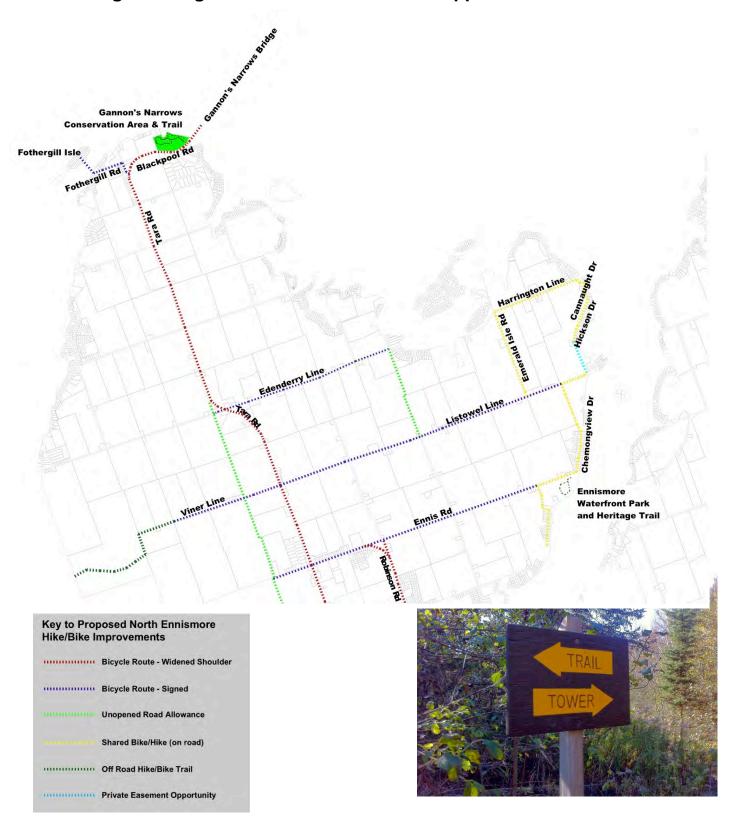


Trail Improvement Projects - Ennismore Appendix C





5.8 Putting it all Together - North Ennismore - Appendix C2







5.9 Putting it all Together - Lakefield

On Road Bicycle Routes – Paved Shoulders / Bike Route Signage

Seventh Line – Otonabee River Edge, to B.E.L. Rotary Bridgenorth Trail Trailhead (Bridgenorth)

Bridge Street/Lakefield Road - Seaforth Crescent, to Water Street

Seaforth Crescent - Lakefield Road, to Seventh Line

Strickland Street - Queen Street, to Township Limits

Clementi Street - Lakefield Road, to D'enycourt Street

D'enycourt Street - Clementi Street, to Hague Blvd

Hague Blvd - D'enycourt Street, to D'enycourt Dead End

Katherine Street - Grant Ave, to Seventh Line (via Waterfront Trail Opportunity)

Victoria Ave - Isabel Morris Park, to Stewart Drive

Off Road Trails – Gravel Surface 1.8m wide (see map for key to trail sections)

- A Lakefield Road, to George Street
- B Young's Point Road, to Smith Street Dead End
- C Lakefield South Secondary Plan Trail Opportunities
- D & E Existing Creek & Ravine Trails (private easement required)
- F Waters Edge Katherine Street Dead End, to Seventh Line (private easement required)
- G George Street Dead End, to Fraser Street (private easement required)
- H Fraser Street, to Clementi Street (private easement required)
- I Clementi Street, to Lakefield Trail (requires boardwalk and detailed design)
- J Waste Water Lagoon Trail Opportunity (review CoA)
- K Private Easement Trail Opportunity
- L Isabel Morris Park Trail (see Park Master Plan for trail layout)

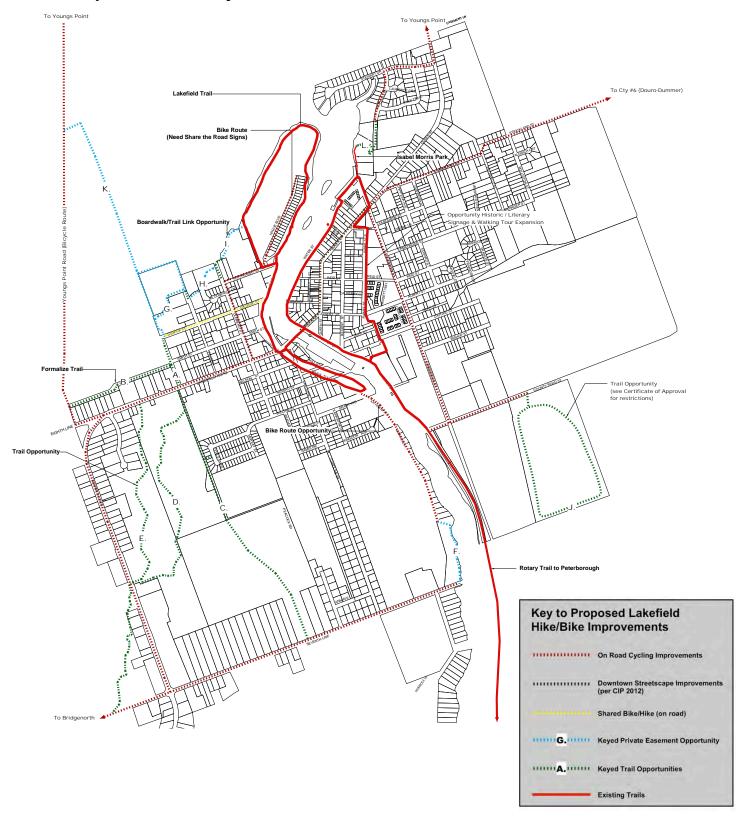








Trail Improvement Projects - Lakefield





5.10 Putting it all Together - Bridgenorth

On Road Bicycle Routes – Paved Shoulders / Bike Route Signage

Seventh Line – B.E.L. Rotary Bridgenorth Trail Trailhead, to Otonabee River Edge (Lakefield) Mann Road – Ward Street, to B.E.L. Rotary Bridgenorth Trail Trailhead Chemong Road – Downtown Bridgenorth Limits, to Fifth Line Fifth Line – Chemong Road, to Hilliard Street Hilliard Street, Fifth Line, to City of Peterborough

Sidewalk - 1.8m wide Concrete

East Communication Road, Ward Street, to Seventh Line Seventh Line East Communication Road, to Mann Road Gore Street – Ward Street, to Charles Street Charles Street, Gore Street, to Ward Street

Off Road Trails – Gravel Surface 1.8m wide (see map for key to trail sections)

A – B.E.L. Rotary Bridgenorth Trail Improvements

B - Chemong Lions park

C – Chemong Waterfrot Park

D - East Communication Road - Unopened ROW

E -Mann Ave - Eighth Line, to Selwyn Road

F - Fifth Line - Unopened Portion ROW

G – Private Lands – Gravel Pit (Bridgenorth Trail Extension)

On Road - Shared Hike/Bike Route (signs only)

(Portions of, see map for location) Westlake Road, Westlake Drive, Denne Lane, Hatton Ave, Hunter Street, Street, Kelly Blvd, Nicholas Blvd, Harrison Street, Ward Street, to Jones Beach Road & Jones Beach

Pedestrian / Bicycle Bridge - Separated

James A. Gifford Causeway



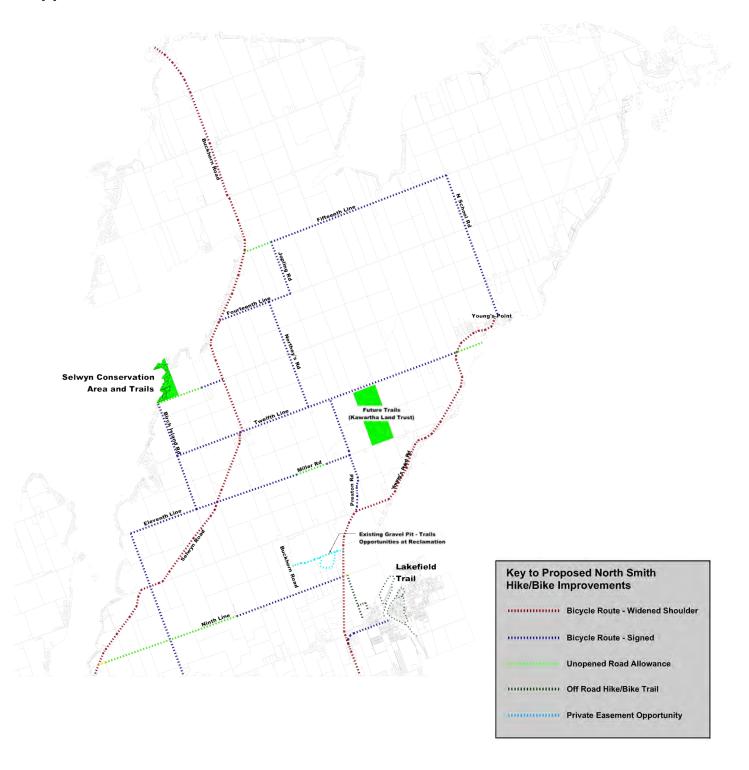




Trail Improvement Projects - Bridgenorth Appendix B To Lakefield Key to Proposed Bridgenorth Hike/Bike Improvements On Road Cycling Improvements Shared Bike/Hike (on road)G. Keyed Private Easement Opportunity Keyed Trail Opportunities Existing Trails / Sidewalk Separated Sidewalk/Bicycle Facility Sidewalk 为的外套出去



5.11 Putting it all Together – North Smith Appendix B2







5.12 Putting it all Together – Young's Point

On Road Bicycle Routes – Paved Shoulders / Bike Route Signage

Young's Point Road - Connecting Lakefield to Young's Point

Off Road Trails – Gravel Surface 1.8m wide (see map for key to trail sections)

- A Township Owned Lands (Fire Hall) Trail Opportunity
- B Re-Development Site Trail Opportunity, negotiate at Site Plan Approval
- C Trail Improvements, under existing bridge, also noted in 2012 CIP
- D Unopened ROW Trail Opportunity

Walking Trail (signs only) - portions on road and off

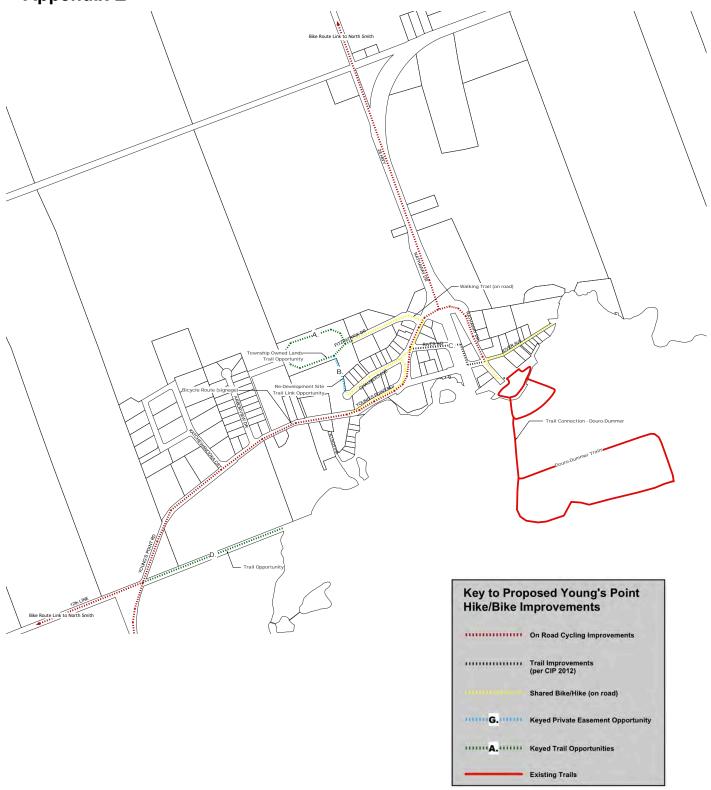
From Locks at Trent Severn – to include portions of Nathanway Drive, River Ave, River Road, Chalmers Ave, Fitzpatrick Road







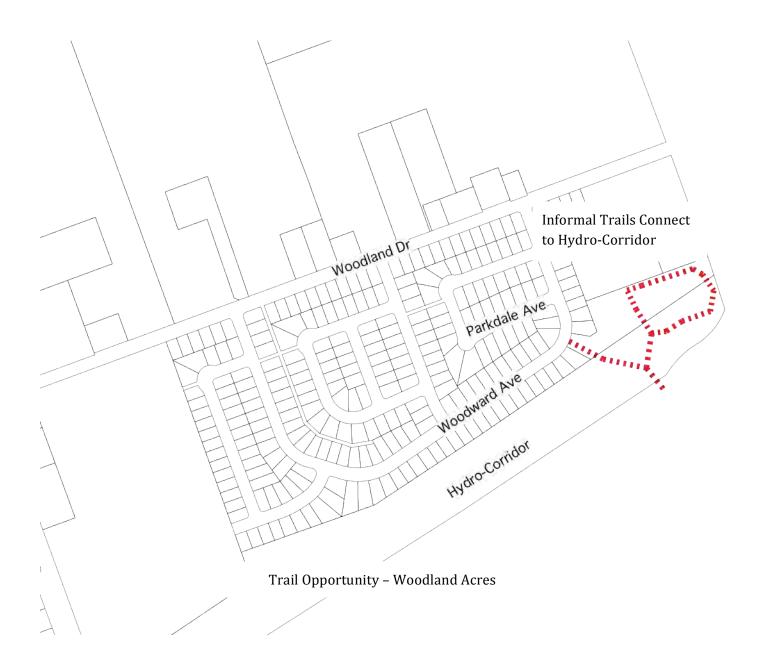
Trail Improvement Projects – Young's Point Appendix E





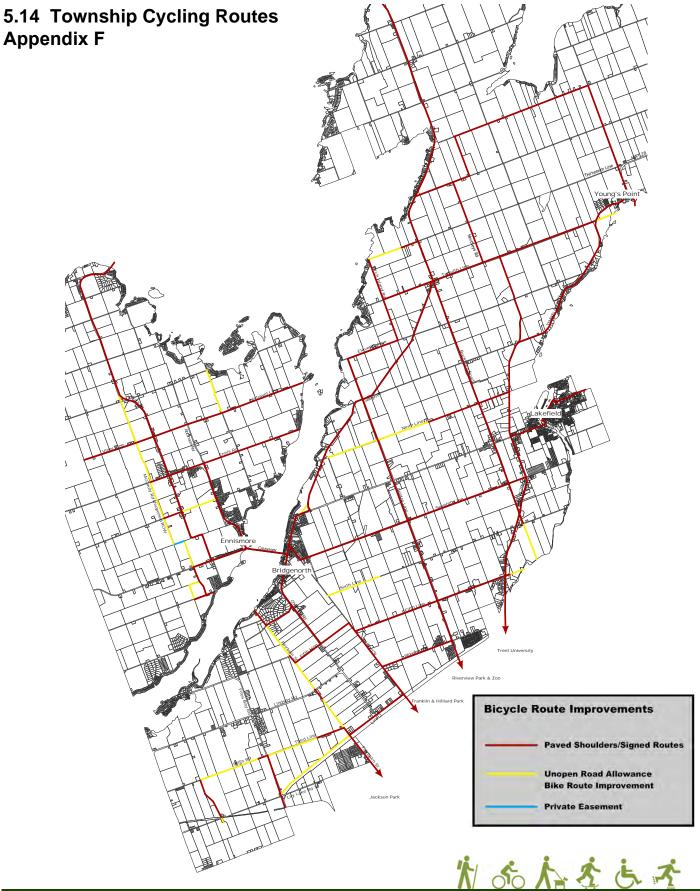


5.13 Putting it all Together - Woodland Acres











Part Two – Design Guidelines



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6.0 Pedestrians and Cyclists

6.1 Pedestrians

Pedestrian travel can be a person's primary mode of transportation. This segment of the population includes enthusiasts of non-motorized travel, those who do not use a motor vehicle including some older adults, children and young adults; people who walk to the bus, people with specific mobility requirements, and people who choose not to pay for other modes of transportation.

6.2 The Importance of Good Design

The importance of good design not only applies to the development of new facilities, but also to the improvement and retrofit of existing facilities. When access is expanded and existing conditions are improved, higher numbers of pedestrians can be expected to use the system.

Pedestrians want facilities that are safe, attractive, convenient, and easy to use. If designed properly, the best public trail facilities can also be durable and easy to maintain. Poor design of trail facilities can lead to perpetual problems. They can discourage use, if pedestrians are made to feel unsafe, unprotected, or uncomfortable. Additionally, unattractive, inadequate, and poorly designed and/or maintained facilities can be a significant burden on financial and staff resources. Good design requires the understanding of pedestrian needs.

ACTIVE TRANSPORTATION PLAN

Halifax Regional Municipality, Nova Scotia

The plan recommends a primary network of onroad and off-road active transportation corridors to connect urban and rural communities, linked to individual neighbourhoods. It includes a longrange implementation plan, technical guidelines for network planning and design, and a framework for education and promotion.

For more information, see www.halifax.ca/activetransportation.



6.3 Pedestrian Needs

- ✓ Safe trails and streets
- ✓ Convenience
- ✓ Nearby places to walk
- ✓ Visibility
- ✓ Comfort and shelter.
- ✓ Attractive and clean environment
- ✓ Interesting things to look at while walking
- ✓ Opportunities for social interaction





6.4 The Bicycle

The bicycle is formally recognized as a vehicle according to the Highway Traffic Act. Cyclists have the right to share all classes of roadways, except controlled access highways. Essentially every road in the Township of Selwyn is a legal bicycle route. It is therefore in the Township's best interest to design and maintain all roads in a way that provides a safe environment for bicycle use. Completing on-road cycling improvements to existing designated roads, when road improvement work is being completed, will help control expenses significantly.

6.5 Cyclist Needs

On-Road Bicycle Safety

Major on-road cycling routes should include measures that have proven to increase safety and encourage increased bicycle use. Any perception of a lack of safety is a deterrent to cycling. Safety considerations include:

- ✓ Cyclists are safer when focusing on traffic and are not distracted by poor cycling conditions.
- ✓ Most collisions involving cyclists occur at intersections.
- ✓ Poor lighting and personal security concerns will deter cyclists.
- ✓ Blocked drains and poorly located drainage grates and manholes are unsafe for cyclists.
- ✓ Debris such as broken glass, sand, dirt, wet leaves, etc. create safety issues for cyclists.

Coherent and Direct Bicycle Routes

Cycling routes within a particular region or system should be logical, continuous and be as direct as possible. Inconvenient routes should be avoided. Road markings and signage should be clear and consistent.

Attractive and Comfortable Bicycle Routes

Major cycling routes should provide a pleasant, interesting and comfortable ride. This is particularly important for beginners, tourists and recreational cyclists. Cycling routes should include windbreaks, provide visual interest, adequate lighting and a cycling surface in good condition, clear of debris. Improved cycling comfort can be achieved through providing adequate space on the road for a cyclist, proper drainage, high-quality surfacing, rest stops; and connected routes that link to points of interest, major trip origins and significant destinations.

Cyclist Etiquette and Safety – (a note to cyclists)

David Suzuki Foundation

'A lot of criticism of the growing number of cyclists in populated areas such as towns and cities is valid: too many blast through stop signs, don't give pedestrians the right-of-way, refuse to signal turns, ride against traffic, don't make themselves visible enough and use sidewalks. Many seem to have a sense of entitlement compelling them to ignore laws. It doesn't take much to learn and follow the rules, and invest in proper gear — including lights and reflectors — it is absolutely necessary. You'll not only be safer; you'll also be less likely to anger motorists, pedestrians and fellow cyclists. People navigating on foot must be aware of surrounding bikes, buses, cars and other people and not wander with their eyes fixed on electronic devices. Car drivers need to follow road rules and be more aware of cyclists and pedestrians. Some cyclists just need to be smarter.' – David Suzuki





6.6 Universal Design for Pedestrians and Cyclists

Universal design means taking into consideration the needs of as many people as possible, and for the purposes of this study, incorporating those needs into trail facilities and services. By taking into consideration the abilities, needs, and interests of the widest range of possible trail users, universal design ensures a range of facilities are developed. Ensuring a wide variety of users can access the Township of Selwyn Recreational Trails system will create a safer and more welcoming experience for all users.

Principles for Universal Design for a Recreational Trails System

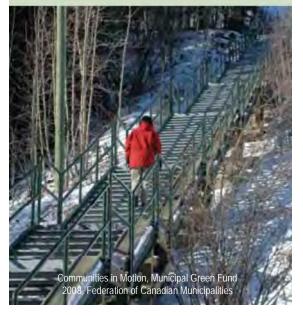
- ✓ Trail facilities should be accessible and universal design will be a primary consideration in any new trails or park development;
- ✓ Trail facilities should provide opportunities for combining user types and avoid separating user types;
- ✓ Trail facilities should provide clear wayfinding signage along all routes;
- ✓ Trail facilities should include rest areas at regular intervals along all major routes;
- ✓ Each trail facility type should utilize standards for the steepness of gradient, including cross slopes;
- All new development plans should be reviewed to ensure accessibility has been adequately considered.

WHITEHORSE MOVES

City of Whitehorse, Yukon

The City of Whitehorse worked with partners to install new trails, a pedestrian bridge, a lighted staircase, downtown bike lanes and several "artisan" bike racks. City residents now enjoy a well-connected network of routes for walking and cycling.

For more information, see www.whitehorse.ca.







7.0 Trail Typologies

7.1 Trail and Bicycle Facilities Typologies

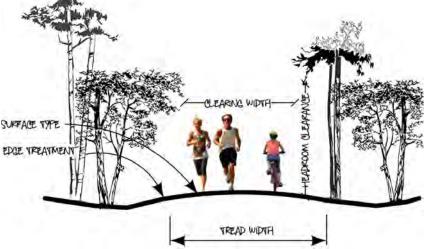
The Recreational Trails Master Plan for the Township of Selwyn proposes several kilometres of trails, including on and off-road routes and supportive pedestrian and bicycle amenities along these routes. An overview of the various trail typologies proposed is provided below.

- ➤ Sidewalk Corridors 1.5 to 1.8 metre sidewalks with accessible ramps, road crossings and landscaping
- ➤ Off-Road Multi-Use Trail –3.0 metre wide (minimum) multi-use trail
- ➤ Off-Road Community Trails 0.75 to 3.0 metre gravel or bark surfaced hiking trails
- ➤ Paved Shoulders 1.2 to 1.5 metre on-road paint delineate shoulders
- ➤ On-Road Signed Bike Routes existing roads clearly labelled as bike routes, including 'share the road' signage

7.2 General Recreational Trail Requirements

To meet the requirements of Ontario Regulation 413/12, made under the Accessibility for Ontarians with Disabilities Act, 2005; the following requirements apply to all recreational trails:

- Trails should have a clear width of 1 metre;
- Trails should have headroom clearance of 2.1 metre above the trail;
- The surface of a recreational trail must be firm and stable;
- Trails constructed adjacent to water or a drop-off require edge protection that is at least 0.5
 metres above the trail surface and that does not impede the drainage of the trail surface;
- The entrance to a recreational trail must provide a clear opening of between 0.85 metre and 1 metre;



Trail Head Signs / Beach Access Routes / Boardwalks / Ramps

Ontario Regulation 413/12, made under the Accessibility for Ontarians with Disabilities Act, 2005; has further requirements detailing design requirements for trailhead signs, beach access routes, boardwalks, and ramps. Find Ontario Regulation 413/12, made under the Accessibility for Ontarians with Disabilities Act, 2005 attached to this report as Appendix 'A'.





8.0 Sidewalk Corridors

Accessible sidewalks and road crossings are the backbone of a trails system. An important part of planning to design a high quality pedestrian environment is having detailed standards for each separate element. To plan for pedestrian facilities within the road right-of-way, it should be considered as having two separate corridors; the "vehicular corridor" and the "sidewalk corridor".

Dividing the public right-of-way into two separate corridors for design purposes will ensure the safe separation of vehicles and pedestrians. Each corridor is then broken down into its parts; the vehicular corridor into car and bicycle zones; and the sidewalk corridor into utility zone, landscape and/or street furniture zone, and pedestrian travel zone. A corridor and zone system for approaching right-of-way design provides flexibility of use while ensuring none of the important component parts are left out.

8.1 Pedestrian Friendly Streets

In the development of any Recreational Trails Master Plan, it is important not to overlook the street. Streets provide an important part of the pedestrian system and are relied on to access offroad trails. Although the purpose of this study is not to provide design guidelines for streets, a set of general principles for pedestrian friendly streets is provided here for reference.



"Cars are happiest when there are no other cars around."

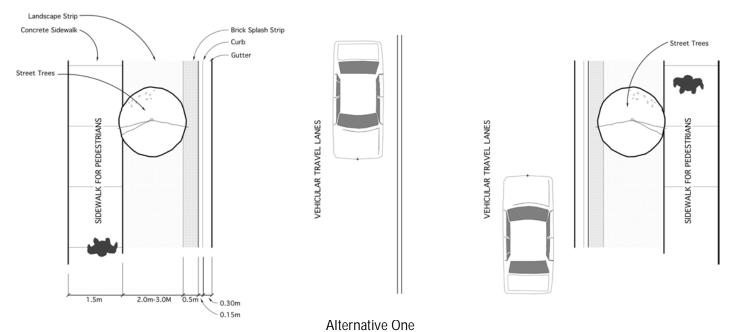
People are happiest when there are other people around."

— Dan Burden



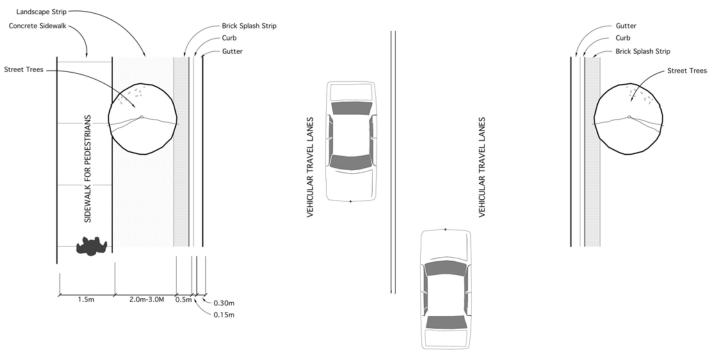


8.2 Sidewalk Corridor Design Guidelines

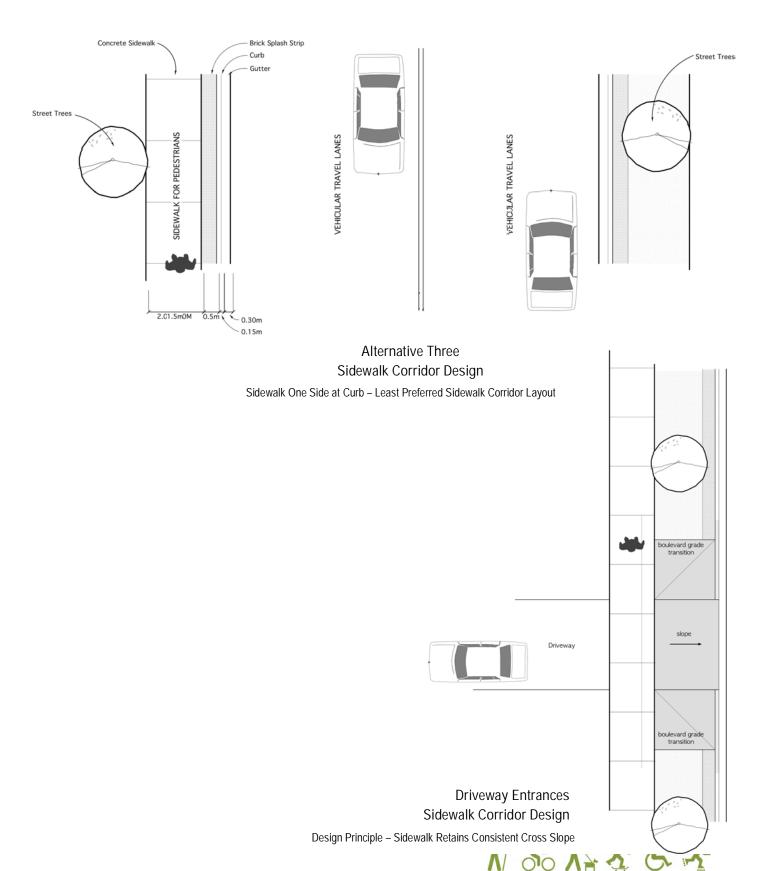


Sidewalk Corridor Design

Sidewalks Both Sides - Preferred Sidewalk Corridor Layout









8.3 Design Principles for Pedestrian Friendly Streets

- ✓ Design the street using the corridor and zone system outlined above;
- ✓ Streets that are interconnected provide good opportunities for pedestrian access and mobility;
- ✓ Narrower streets, scaled down for pedestrians, are less conducive to high vehicle speeds;
- ✓ In downtown areas, consider awnings/covered building entrances that shelter pedestrians from weather;
- ✓ Plan wide (1.5-1.8 metres) and continuous sidewalks or separated walkways that are fully accessible;
- ✓ Use street furnishings, such as benches, garbage receptacles, drinking fountains, and newspaper stands, that are not placed in the route of travel, in downtown areas;
- ✓ Use signs, information kiosks, maps and other elements in downtown cores and public spaces to help pedestrians.

8.4 Design Principles for Accessible Sidewalks

- ✓ Sidewalks should be accessible to all users (follow the principles of universal design);
- ✓ Sidewalks should be an adequate width (1.5-1.8 metres)
- ✓ Sidewalks should be safe to use (sidewalk users should not feel threatened by adjacent traffic or by the environment);
- ✓ Sidewalks should be continuous and connected (sidewalks are safely connected to other pedestrian infrastructure);
- ✓ Sidewalks should include a landscaped buffer space between pedestrians and traffic, providing safety and shade;
- ✓ Sidewalks should include rest areas, where pedestrians can rest safely and participate in public leisure:
- ✓ Rest Areas will include as a minimum, a metal bench, a waste receptacle and a bicycle lock up:
- ✓ Rest Areas should be spaced at 500-1000 metres, with a closer spacing used along the corridors that are most frequently used;
- ✓ Sidewalks should not exceed a 2% cross slope;

8.5 Typical Sidewalk Construction Program

- 1. Prioritize sidewalk improvement projects, with safety issues receiving top priority;
- 2. Follow design standards and principles to develop the appropriate design;
- 3. Identify the supportive elements to be included within the sidewalk corridor, i.e. street trees, splash strips;
- 4. Identify road crossing and driveway conflict issues and use design standards and principles to resolve;
- 5. Prepare construction documentation and cost estimates;
- 6. Issue tender and construct sidewalk improvement.





9.0 Multi-Use Trails

9.1 Multi-Use Trails – Minimum 3.0 Metre Wide Shared Trails

Multi-use trails are designed to safely accommodate a wide variety of trail user types and two-way travel. This type of trail facility scores highest for safety, trail use promotion, and potential number of users. Multi-use trails are primary recreational components within many communities. They serve as transportation and recreational conduits for both residents and visitors. Designed to support a wide variety of trail users from cyclists to rollerbladers, walking and wheelchairs, the trails are a minimum of 3.0 metres wide and where possible, an asphalt surface is preferred for these facilities.



There are three main existing off-road, multi-use trails in the Township at present. The Lakefield Trail, the Ennismore Heritage Trail, and the B.E.L. Rotary Bridgenorth Trail are the most widely used trail systems in the Township. The Lakefield Trail was established in late 2000, as a community Millennium project, and is a 5.5 kilometre long trail meandering through the Village of Lakefield. The Trail connects to the Trans Canada Trail via the County Rotary Trail between Lakefield and Peterborough. The B.E.L Rotary Bridgenorth Trail was completed in 2010 and is approximately 2.3 kilometres in length running from Brumwell Street to the 5th Line; and the Ennismore Heritage Trail is located at the Ennismore Waterfront Park and includes 3 loops with a total trail distance of approximately 4 kilometres.

It will be in the Township's best interest to continue to invest in, expand on, and support these main recreational facilities. The Lakefield Trail, the Ennismore Heritage Trail, and the B.E.L. Rotary Bridgenorth Trail offer excellent opportunities for building on already well-used trails. For these reasons, specific recommendations for continued investments in these three trails systems are provided in the recommendations section of this report. A new multi-use trail for the Ennismore waterfront is also listed in the recommendations section of this report and the proposed trail alignment is shown on the Recreational Trails Master Plan.

As the trails system in the Township of Selwyn grows, usage requirements will require the Township to consider additional trails including multi-use trails. Locations for new off-road trails are provided in the Recreational Trails Master Plan along unopened public road right-of-way's, where private easements would be required, within utility / hydro corridors. Additionally, the Township may consider using the boulevard section of the public road right-of-way, along the roads identified, as major bicycle routes. In these locations, a widened shoulder along with a curb separated concrete sidewalk will serve multiple users.





Multi-Use Trails

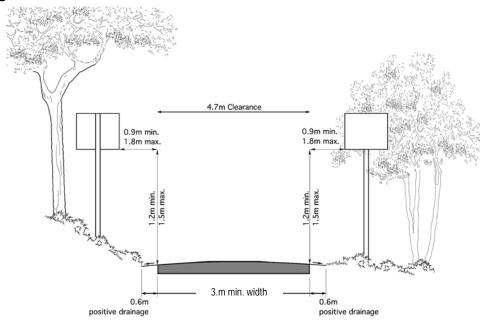


Diagram: Modified from the 1999 AHSTO Guide for the Development of Bicycle Facilitie.

9.2 Multi-Use Trails – Within the Road Right-of-Way (ROW)

Separate multi-use trails along the roadside are popular in high demand locations. Trail users on multi-use boulevard trails have the right-of-way as they intersect private driveways allowing for continuous travel.

However, when locating trails within the public road, right-of-way consideration must be given to driveways and intersecting roadway conflicts, in order to select routes with the least number of potential conflicts. At intersecting roadways, motor vehicles making right hand turns may not be anticipating the speed at which some users of the trail may be traveling and cautionary signs need to be used appropriately. Design guidelines for integrating multi-use trails into the public road right-of-way are provided in this section of the report.

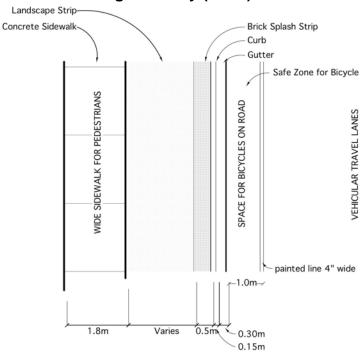
The following are some general roadway conditions that Township staff should review where the application of a multi-use boulevard trail within the public road right-of-way is being considered:

- ✓ Urban arterial, collector or rural roads where there is ample right-of-way between the edge of the road or curb for urban cross section; and shoulder for rural cross section, and maintain a minimum separation of 2 metres between the road and the trail;
- ✓ Routes that provide connections between important destinations or links, where no alternative route exist nearby; and
- ✓ Along corridors where there are limited commercial or residential driveway crossings.





Multi-Use Trails - Within the Road Right-of-Way (ROW)

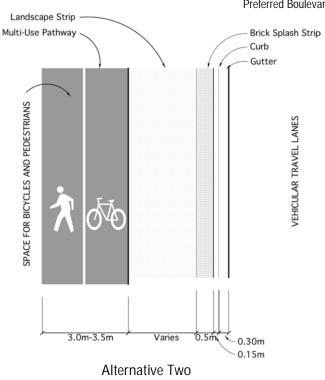


Alternative One Multi-Use Boulevard Design

Preferred Boulevard Layout for Multi-Use

Multi-Use Pathway

SPACE FOR BICYCLES AND PEDESTRIANS



Multi-Use Boulevard Design

2nd Preferred Boulevard Layout for Multi-Use

3.0m-3.5m 0.5m 0.30m 0.15m

Alternative Three

Multi-Use Boulevard Design

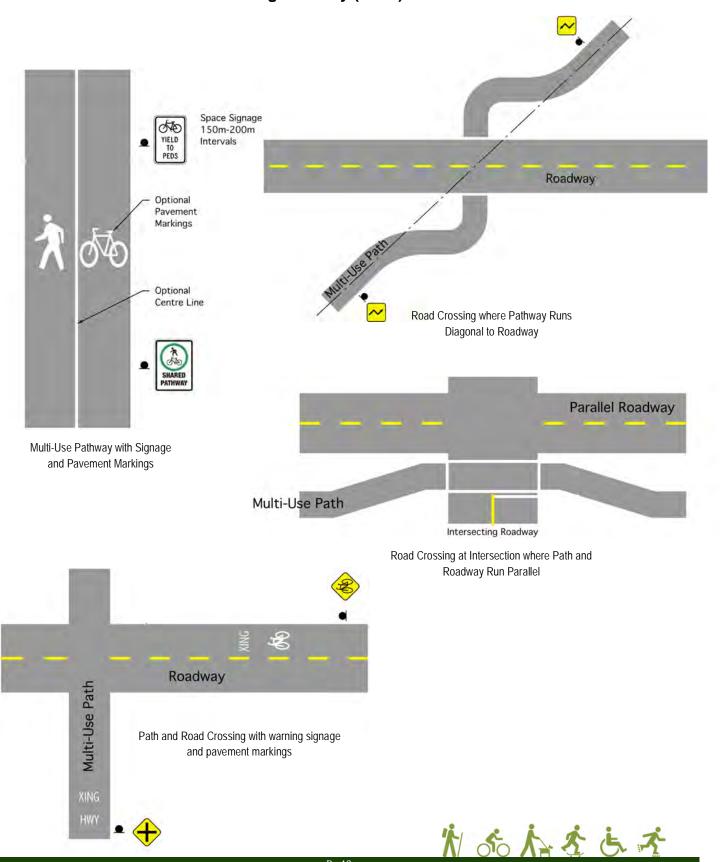
Brick Splash Strip

VEHICULAR TRAVEL LANES

Gutter



Multi-Use Trails - Within the Road Right of Way (ROW)



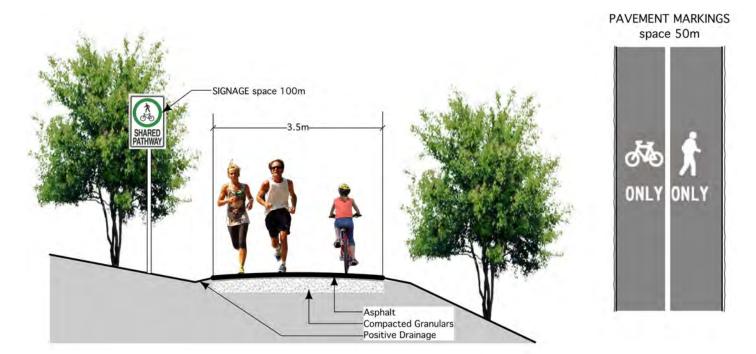


9.3 Principles for Multi-Use Pathways in the Township of Selwyn

- ✓ Multi-Use pathways should be accessible;
- ✓ Multi-Use pathways should provide opportunities for combining trail user types;
- ✓ Multi-Use pathways should provide clear wayfinding signage along routes and at access points;
- ✓ Multi-Use pathways should include rest areas at regular intervals;
- Multi-Use pathways should utilize a gradient maximum of 5% and, where possible, should not exceed a 3% gradient;
- ✓ Multi-Use pathways should utilize a cross slope of 2%.

9.4 Typical Trails Construction Program

- 1. Complete a background review for available information
- 2. Follow the design standards noted above and flag the proposed trail alignment.
- 3. Complete a topographic survey of the flagged route
- 4. Determine wayfinding and trailhead signage requirements
- 5. Prepare construction documentation
- 6. Prepare cost estimates
- 7. Issue tender and construct trail section



Multi-Use Recreational Trail Section





10.0 Community Trails

10.1 Community Trails – 0.75 to 2.5 Metre Wide Hiking Trails

Community trails identified in the Township of Selwyn Recreational Trails Master Plan are intended to support walking, hiking and an appreciation for nature. Priority projects are listed in the

recommendations section of this report and proposed trail alignments are shown in the Recreational Trails Master Plan. The Township of Selwyn is provided with some flexibility in configuration and should select the trail type from those shown below based on the number of anticipated users and proximity to significant local destinations. Soft surfaced trails may be grubbed and treated with a trail surface hardener. More heavily used trails should be surfaced with compacted granular or asphalt. These trails would be identified with trailhead signage and used to provide recreational opportunities and connections between popular destinations. These guidelines will also offer a consistent treatment for new community trails made possible by new development. Trail width will range from 0.75 metres, which is considered a community trail, to 2.0 metres wide, considered a hiking trail.



Trail Width- 1.5m

10.2 Design Guidelines for Community Trails

The Parks and Recreation Department should be responsible for developing a capital program for upgrading existing trails and developing proposed trails. Priority projects are listed in the recommendations section of this report. In the case of any new development in the Township of Selwyn, opportunities for new community trails and trail connections should be considered important. These trail standards can be used to discuss trail opportunities with developers and to negotiate for trails within any new development areas. The general standards to follow in routing and building these trail sections are provided below.



Trail Width- 1.8m



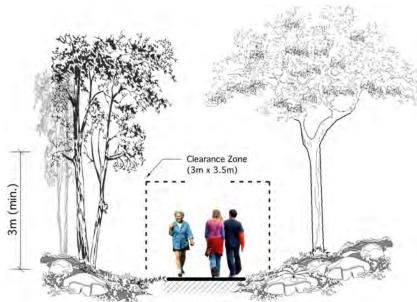
Trail Width- 2.0m

Proposed Trail Width based on Levels and Type of Usage





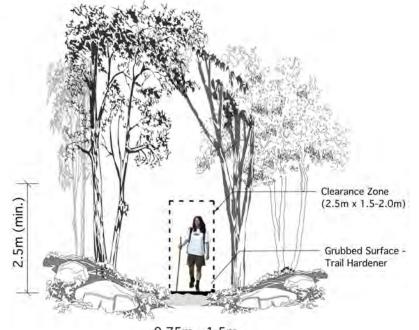
Design Guidelines for Community Trails



0.6m 1.5m-2.0m 0.6m
Cleared Asphalt or, Cleared
Compacted Granulars

Alternative One Community Trail Design

Preferred Community Trail for Heavily Used Trails and Trails close to Major Destinations



0.75m - 1.5m Cleared Path

Alternative Two
Community Trail Design

Preferred Community Trail for Non-Heavily Used Trails and Less Populated Areas





10.3 Design Principles for Community Trails

- ✓ Community trails should be accessible;
- ✓ Community trails should provide clear wayfinding signage along routes and at access points;
- ✓ Community trails should include rest areas at regular intervals;
- ✓ A curvilinear trail alignment is more pleasing for trail users
- ✓ Community trails should utilize a gradient maximum of 10% and where possible, should not exceed 5%;
- ✓ Community trails should be routed to generally maintain the existing drainage patterns
- ✓ Community trails should be routed to minimize the clearing of tree and vegetation.

10.4 Typical Trails Construction Program:

- 1. Look for resident groups interested in "adopting the trail" including helping to construct;
- 2. Complete a background review for available information;
- 3. Complete "on the ground" field inspections;
- 4. Follow the design standards noted above and flag the proposed trail alignment;
- Complete a topographic survey of the flagged route;
- 6. Determine wayfinding and trailhead signage requirements
- 7. Prepare construction documentation;
- 8. Prepare cost estimates;
- 9. Issue tender and construct trail section.

GRAND CONCOURSE WALKWAY

St. John's Metropolitan Area, Newfoundland and Labrador

This 120-kilometre system of interconnected walkways links schools, seniors' homes and other destinations to parks and waterways in St. John's, Mount Pearl and Paradise. The Grand Concourse features rest areas, wayfinding and interpretive information, and is managed by an authority with the involvement of local municipalities.

For more information, see www.grandconcourse.ca.







11.0 Bicycle Facilities

High priority bicycle routes are shown in the Recreational Trails Master Plan as proposed 'paved shoulders', which are required to be delineated with a painted line for safety and separation. In the case of any new road development in the Township, opportunities for integrating bicycles into the road design should be considered.

11.1 Space Requirements for Cyclists

The standard required space to accommodate a cyclist used in bicycle facility planning is provided by the Transportation Association of Canada's (TAC) Geometric Design Guide for Canadian Roads. A 2 metre height and a 1.5 metre width is recommended for low speed (<60 km/h), moderate traffic volume roadways.

In constrained conditions, such as on low speed, low to moderate traffic volume roadways, an absolute minimum 1.2 metre bike lane may be applied for short distances. TAC notes: "the bicycle is a distinct vehicle, which is often used in locations of substandard geometrics. In such cases, providing suitable warning signs along bicycle routes is a significant consideration in maintaining safety." For higher speed, higher volume multi-lane roads, a width of 1.8 metres is recommended, bike lanes in excess of 1.8 metres for one-way are undesirable.



11.2 Steepness/Gradient and Bicycle Facilities

For on-road bicycle facilities in locations where gradients exceed 8%, it is preferable to widen the standard 1.5 metre bike lane to 1.8 metres. This standard is applied where the width of the ROW allows for widening and is required, based on the fact riders climbing hills tend to use a wider area due to the side-to-side movement of the bicycle during the climb. During a descent on a gradient exceeding 8%, cyclists may weave in order to correct their travel line or maintain their balance.

In locations where it is not possible to widen the bicycle lane due to right-of-way restrictions, alternative routes can be identified. Where alternative routes cannot be identified, signage should be used. TAC guidelines suggest posting a Motor Vehicle Passing Prohibited sign (RB-33) and a Do Not Pass Bicycle tab sign (RB-33S) to warn motorists that they must not overtake a cyclist within a specified zone. For off-road bicycle facilities, ideal gradients should be less than 5% for climbs of 50 metres or less, and less than 3% for climbs greater than 50 metres. In addition, flat rest areas should be incorporated every 30 metres.

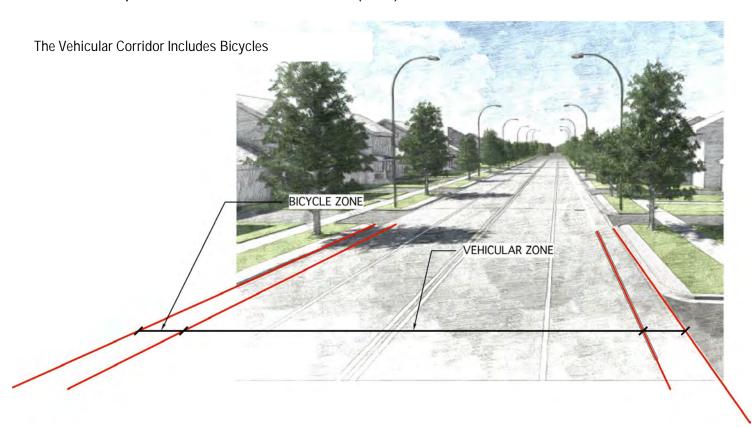
11.3 Cross Slope

For drainage purposes cross slopes are required to maintain safe cycling conditions. Off-road bicycle paths should be designed with a 1.5% cross slope. On-road bicycle facilities will achieve adequate drainage based on standard roadway design, which is governed by both MTO's Geometric Design Standards and TAC's Geometric Design Guide.





11.4 Design Guidelines for Bicycle FacilitiesSource: Transportation Association of Canada (TAC)



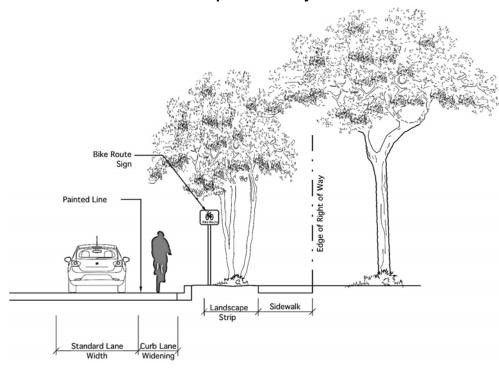


The bicycle is formally recognized as a vehicle according to the Highway Traffic Act

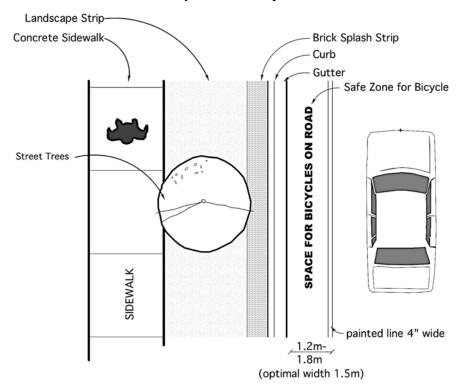




On-Road Bike Facility – Type One On-Road Widened Shoulders As Dedicated Space For Bicycles



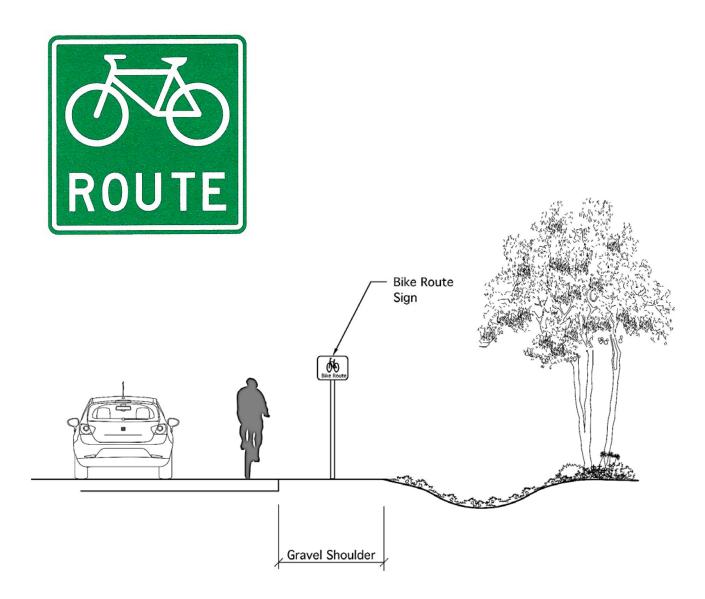
On-Road Bike Facility – Type One On-Road Widened Shoulders As Dedicated Space For Bicycles







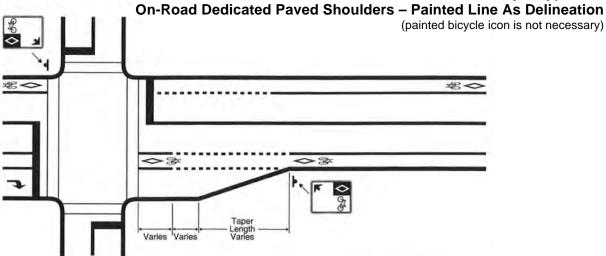
On-Road Bike Facility - Type Two Bike Route Signage Only - On Existing Routes



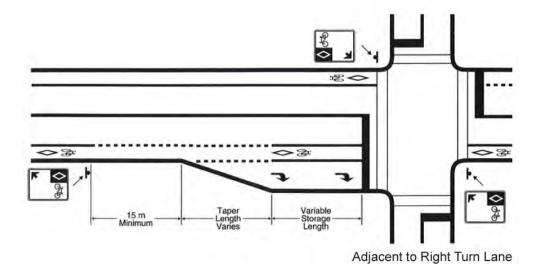


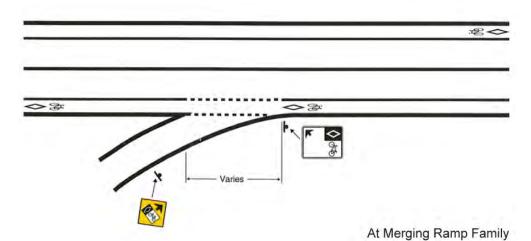


On-Road Bike Facility – Type One



Adjacent to Merge Lane



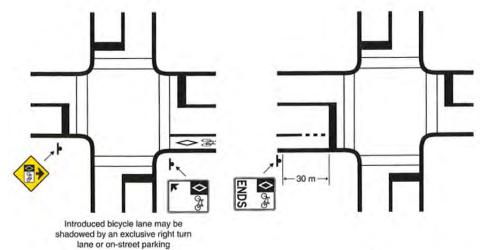




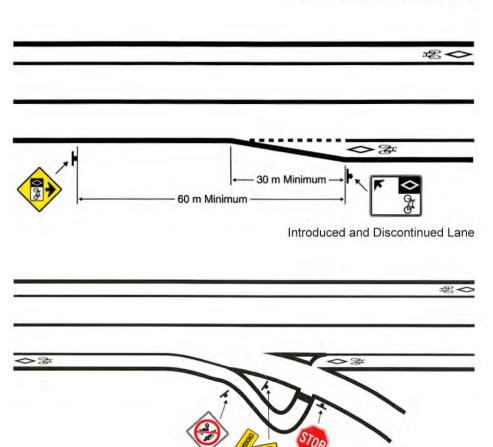


On-Road Bike Facility – Type One On-Road Dedicated Paved Shoulders – Painted Line As Delineation

(painted bicycle icon is not necessary)



Introduced and Discontinued Lane



Jug Handle at Diverging Ramp

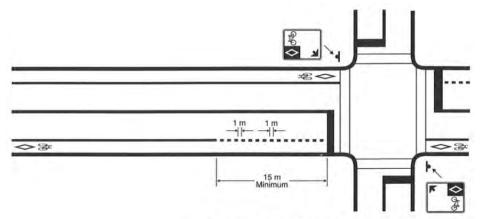


Optional

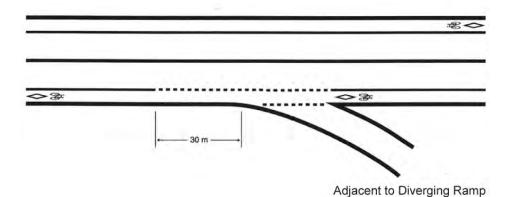


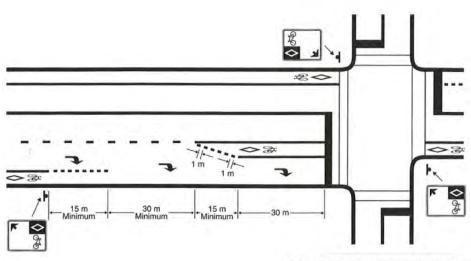
On-Road Bike Facility – Type One On-Road Dedicated Paved Shoulders – Painted Line As Delineation

(painted bicycle icon is not necessary)



Adjacent to Combined Through/ Right Turn Lane



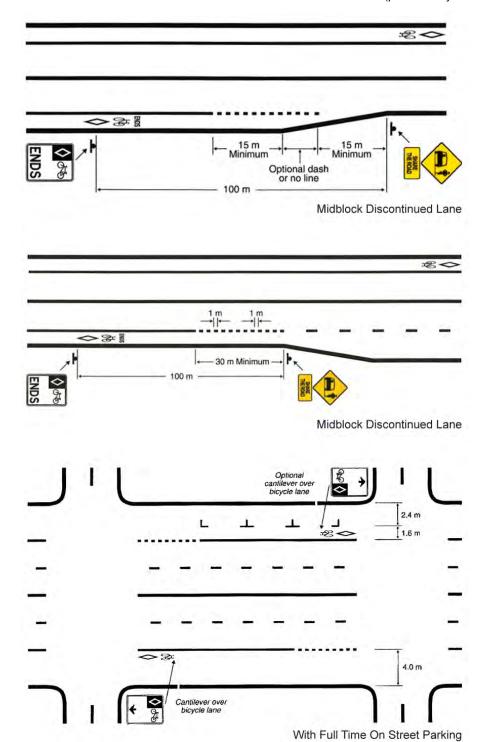


Adjacent to Introduced Turn Lane



On-Road Bike Facility – Type One On-Road Dedicated Paved Shoulders – Painted Line As Delineation

(painted bicycle icon is not necessary)







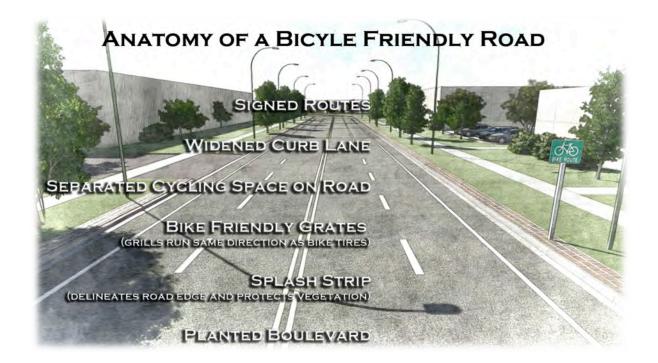
11.5 Principles for Accessible Bicycle Facilities in the Township of Selwyn

General considerations for maintaining roads that provide a safe environment for bicycle use include; wide curb lanes, proper signage, pavement markings to delineate the limits of the motor vehicle lane, bicycle friendly drainage grates, and adjustments to detection loops at intersections to ensure that a bicycle will actuate a traffic signal.

- ✓ Paved shoulders must be delineated with a painted line, (do not include a widened shoulder without paint separation)
- ✓ Bicycle facilities should be available to all user types, (following the principles of universal design;)
- ✓ Bicycle facilities should be an adequate width, (see design guidelines;)
- ✓ Bicycle facilities should be properly signed for safety and wayfinding;
- ✓ Bicycle facilities should be continuous and connected, with bike routes safely connected to other pedestrian infrastructure;
- ✓ Bicycle facilities should include rest areas and amenities for cyclists.

11.6 Typical Construction Program for Bicycle Facilities:

- 1. Prioritize bicycle route improvement projects;
- 2. Include the local cycling community in project prioritization and facility type from these guidelines;
- 3. Complete projects in conjunction with proposed capital improvement projects;
- 4. Determine wayfinding and signage requirements
- 5. Prepare construction documentation with the associated capital improvement project;
- 6. Prepare cost estimates;
- 7. Issue tender and construct with associated capital improvement project.







Selwyn

Part Three – Implementation

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16.0 Next Steps







12.0 Maintenance and Operations

An important part of a long-term plan to construct the final recreational trails system for the Township of Selwyn will be ensuring that resources are available to maintain the infrastructure, as it is constructed. It will be necessary for the Parks and Recreation Department, along with the Public Works Department, to review the current maintenance regime and, as the bicycle and trail facilities expand, to plan for increased maintenance and operational requirements for the proposed facilities.

12.1 On-Road Bicycle Facilities Maintenance and Operations:

So that bike lanes, bike routes and widened shoulders are maintained in a manner that ensures the safety of these routes, the following maintenance practices should be incorporated into existing practices.

Sweeping: Annual removal of sanding materials, dirt, litter and debris from all roads with bike lanes, bike routes and widened shoulders. Additional sweeping will take place as required.

Surface Problems: Regular review of surface quality should be conducted and any potholes and other surface irregularities should be patched; including ridges or cracks as needed.

On-Road Bicycle Signage: The bicycle signs identified in the design guidelines in this report should be maintained in the same manner as Township roadway signs are typically maintained.

On-Road Bicycle Markings: Bicycle lane paint markings should be renewed at the same time that routine paint marking for the roadways is completed.

12.2 On-Road Bicycle Facilities Maintenance Cost Controls

The cost of incorporating the above noted practices into current maintenance routines will vary based on the amount of pedestrian and bicycle facilities constructed and the frequency of routine activities. Review of surface conditions, signage and road markings should be a routine practice within the Township. It is important to understand that new hiking and cycling routes and their associated repair and maintenance will gradually increase the cost of maintenance and manpower requirements. These should be monitored and reported to Council if increases become significant.

12.3 Hiking Trails Maintenance and Operations

The recommendations provided below should be merged with the Township's current maintenance practices to ensure multi-use trails and community trails are maintained in an appropriate manner to ensure safety.

Grasses Adjacent to Trail Edges: Tall grasses should be mowed ensuring potential hazards are not hidden from a cyclist's view. Vegetation also needs to be prevented from breaking up the edge of pavement and encroaching on the trail surface. A clearing strip on each side of the trail surface that is a minimum of one mower width, approximately 0.5 metres, should be maintained.

Signing and Marking Trails: Regular inspections for theft or vandalism should be conducted to ensure that signs are still in place and in good condition. Special attention should be paid to regulatory and warning signs.

General Clearing of Debris: All trails and trail linkages should be patrolled regularly and inspected to ensure that debris is removed.



12.4 Trails And Linkages-Township And Departmental Responsibilities

ACCELERATING ACTION

City of Winnipeg, Manitoba

The City of Winnipeg's surge in active transportation programs has been championed by the mayor and strongly supported by council and energetic community groups. Since conducting its 2005 Active Transportation Study, the city has hired a dedicated coordinator and formed an advisory committee. Over the same period, the city's capital budget for active transportation has risen from \$300,000 to more than \$3 million.

For more information, see www.winnipeg.ca/services/transportation.



Leadership and municipal support will be needed to implement this plan. Elected officials will be a part of moving recommendations in this report forward. Council and senior management should be kept informed of continual efforts, as well as the necessary resources required, in order to move the plan forward.

It will be important to dialogue and coordinate trail initiatives with the County of Peterborough, as they develop their Active Transportation Plan.

Leverage It

Establish partnerships and work with neighbourhood/community interest groups and multiple levels of government to encourage and support local walking and cycling initiatives.







13.0 Costs and Budgeting

The Consultant Team has prepared 'order-of-magnitude' cost estimates for the Trail and Linkage Projects and Pedestrian improvements. The estimates are intended to provide elected officials, Township staff, and the public with an initial understanding of costs involved with undertaking the improvements described in the Township of Selwyn Recreational Trails Master Plan. All proposed improvements require more detailed designs and cost estimates to be completed. The figures below are provided for guidance only.

13.1 Order of Magnitude Units Costs - Miscellaneous Work, Amenities, and Signage

(template for rough cost estimate purposes)

Magnitude of Cost Estimates provided for rough cost estimation purposes only					
Item No.	Description of Item	Unit	Quantity	Unit Price	Total

	Trai	ls Gener	al		
1.1	Rough Grading (includes leveling and compaction)	ln.m.	\$25.00	\$-	
1.2	Granular Surface Trail (assumes normal site conditions 2.0m wide trail)	ln.m.	\$110.00	\$-	
1.3	Asphalt Trail (assumes normal site conditions 3.0m wide trail)	ln.m.	\$150.00	\$-	

	Waterfront Stabilization/Naturalization				
2.1	Shoreline stabilization	ln.m.	\$300.00	\$-	
2.2	Armourstone retaining wall	fc.m ²	\$220.00	\$-	
2.3	Post and wire fencing	ln.m.	\$55.00	\$-	

	Trail Amenities					
3.1	Bollards at Intersections	ea	\$750.00	\$-		
3.2	Trash Receptacle	ea	\$900.00	\$-		
3.3	Bike Lock up	ea	\$700.00	\$-		
3.4	Benches	ea	\$2,000.00	\$-		

Signage and Wayfinding					
4.1	Regulatory Signs	ea		\$200.00	\$-
4.2	Interpretive Signs	ea	\$	1,500.00	\$-
4.3	Directional Markers	ea		\$100.00	\$-
4.4	Trail Heads w/Trail Map Signage	ea	\$	3,000.00	\$-





13.2 Order Of Magnitude Units Costs – Trails and Trail Linkages (template for rough cost estimate purposes)

MAGNITUDE OF COST ESTIMATES

provided for rough cost estimation purposes only

Item No.	Description of Item	Unit	Qty	Unit Price	Total
----------	---------------------	------	-----	------------	-------

	Multi Use Trail 3.0 M	etres Wide		
1.1	Rough Grading (includes leveling and compaction)	ln.m.	\$20.00	\$-
1.2	Granular Surface Trail (assumes normal site conditions 3.0m wide trail)	ln.m.	\$110.00	\$-
1.3	Asphalt Trail (assumes normal site conditions 3.0m wide trail)	ln.m.	\$140.00	\$-

	Community Trail 2.0 M	letres V	/ide		
1.1	Rough Grading (includes leveling and compaction)	ln.m.		\$16.00	\$-
1.2	Granular Surface Trail (assumes normal site conditions 3.0m wide trail)	ln.m.		\$80.00	\$-
1.3	Asphalt Trail (assumes normal site conditions 3.0m wide trail)	ln.m.		\$100.00	\$-

_	Community Trail 1.0-1.5 Metres Wide				
1.1	Rough Grading (includes leveling and compaction)	ln.m.	\$10.00	\$-	
1.2	Granular Surface Trail (assumes normal site conditions 3.0m wide trail)	ln.m.	\$60.00	\$-	
1.3	Asphalt Trail (assumes normal site conditions 3.0m wide trail)	ln.m.	\$80.00	\$-	





14.0 Trails and Bicycle Use Promotion

Maximize Your Market. Several tools help make active transportation a desirable choice. Promotional events raise awareness and encourage people to try new ways of getting around. Awards recognize key individuals and organizations. Maps help cyclists and pedestrians find the best routes and the Township of Selwyn should ensure that their trails mapping is included in the County's GIS data. Advertising and media coverage can build a positive image for active transportation, while targeted marketing helps families explore travel options in a personal and customized way. The Township should dialogue with the County of Peterborough and others to ensure Township mapping is included in regional trails and bicycle literature.

Build It

Develop an implementation strategy for trail projects that access available resources and ensure trail linkages are completed, shoulders along bikes routes are paved, and that proper signage is posted.

Focus On Safety. While changes to signs, signals, streets and trails may be needed to improve safety, other measures can be just as important. Educational programs teach drivers to share the road with cyclists. Training courses give cyclists the skills and confidence they need to ride in traffic. Enforcement campaigns encourage cyclists to have the right safety equipment, and encourage everyone to obey the rules of the road.

Help Children Get To School. Across Canada, communities are promoting alternatives to children being driven to school. 'Walking school buses', 'cycling trains', school-to-school contests and classroom curricula can improve children's physical and mental health, and reduce congestion and emissions around schools. Physical changes to active transportation routes support these efforts, making routes safer and more convenient for children.

ACTIVE AND SAFE ROUTES TO SCHOOLS

City of Peterborough, Ontario

Local organizations including the City of Peterborough have partnered to encourage active transportation by school children. Activities include Cool Captain Climate transportation shows, International Walk to School Day, a Cross-Canada Walking Challenge, school zone anti-idling projects, monthly IWALK days and school travel maps.

For more information, see www.peterboroughmoves.com.



Extend Your Reach With Partnerships. Municipalities shouldn't try to do it all by themselves, when partners offer much-needed energy, knowledge and skills. Non-profit organizations can run educational programs and special events, employers can offer incentives to active transportation commuters, and associations can educate professionals about active transportation planning and implementation.







15.0 Phasing Strategy – Township of Selwyn

15.1 Township Recreational Trails Advisory Committee

In order to provide the necessary momentum and organization required to implement a long term vision such as the Selwyn Recreational Trails Master Plan, an important part of the phasing strategy will be a Township Recreational Trails Advisory Committee. It is recommended that a committee be formed to provide guidance related to moving the plan forward. This Committee, with staff assistance, should be tasked with confirming yearly priorities and recommended projects, along with cost estimates for those projects, to Council for budget consideration each year.



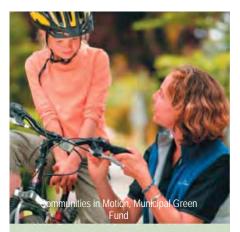
A Terms of Reference will be prepared in consultation with the existing Ad-Hoc Trails Committee prior to December 2014 for Council's consideration.

15.2 Committee 'Draft' Vision Statement:

'The Township of Selwyn Recreational Trails Advisory Committee is dedicated to assisting in developing a safe integrated trails system that connects local and regional destinations, supports local walking and cycling, provides public accessibility and contributes to the overall beautification and sustainability of the Township of Selwyn.'

<u>Important:</u> This master plan document is a living document and requires monitoring. Updating the implementation plan and adjusting long-term objectives along with the project completion timeline, is an ongoing task - annual budgets, grant opportunities, changes in Council, may provide both challenges and opportunities - the Township of

Selwyn Recreation Trails Advisory Committee needs to remain cognizant of this.



TRAVELSMART

Metro Vancouver, British Columbia

A number of area municipalities recently partnered with TransLink to test the potential of targeted marketing. Preliminary results indicate that by offering households customized information and incentives, the TravelSmart project increased walking by almost 10 per cent and cycling by more than 30 per cent in a variety of neighbourhoods.

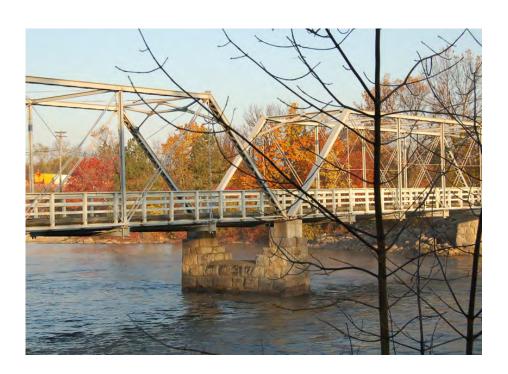
For more information, see www.translink.bc.ca/projects.





15.3 Recreational Trails Advisory Committee – Principles for the Terms of Reference

- ✓ Review, measure and recommend any adjustments related to the Plan's objectives on a yearly basis, to ensure its effectiveness;
- ✓ Consult efforts with the Public Works Department so that any planned road reconstruction and resurfacing projects include the necessary pedestrian and cycling improvements;
- Priority?
- ✓ Consult efforts with the Planning Department so that new development areas are required to incorporate connecting routes into the overall development and link with the planned pedestrian trail system;
- ✓ Continue soliciting and evaluating suggestions from the public regarding priorities for trails and linkages; this Recreational Trails Master Plan document should be considered a living document that requires monitoring and updates, as conditions change and/or opportunities arise;
- ✓ Prioritize projects where the highest demand is anticipated, addressing any identified safety concerns and targeting key areas;
- ✓ Links that are part of existing trails should receive the highest priority;
- ✓ Links to Peterborough identified in this report should receive a high priority;
- ✓ Proposed trails in new, or redeveloped, public park should receive a high priority;
- ✓ Trails along public portions of waterfront should receive a high priority;
- ✓ Trail head signage and wayfinding signage should be integrated into each pedestrian improvement project;
- ✓ Coordinate trails, linkages and trail amenities to complement the Township's approved Community Improvement Plan (CIP).

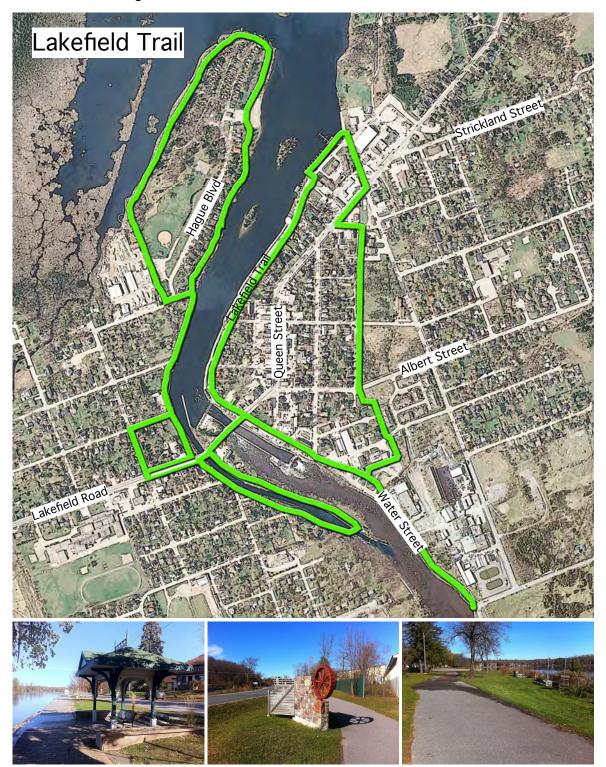






15.4 Lakefield Trail - Priority Projects

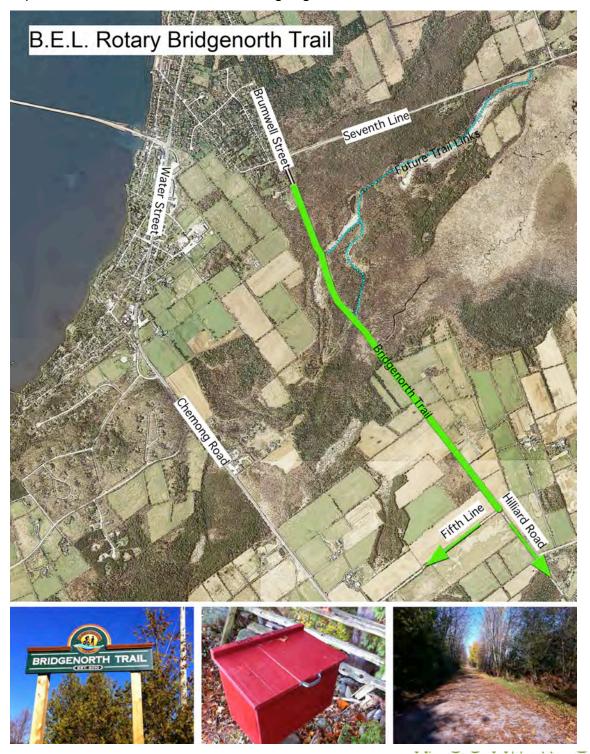
- 1. Walkway widening at Stanley Street to create a loop and complement the new sidewalk at Queen and Concession Street.
- 2. Replace interpretive/historical signage.
- 3. Consider a trail connection from Smith Street across County ROW behind Kawartha Lakes Construction to Young's Point Road.





15.5 B.E.L Rotary Bridgenorth Trail - Priority Projects

- 1. Cycling connection along Hilliard Street to connect the B.E.L Rotary Bridgenorth Trail to Peterborough (signage and pavement markings on the widened section of Hilliard Street from Woodland to 3rd Line).
- 2. Wayfinding signage in Bridgenorth to highlight points of interest and trail connections complement the Community Improvement Plan.
- 3. Increase promotional efforts for this trail using regional trails literature and online efforts.





15.6 Ennismore Heritage Trail - Priority Projects

- 1. Improve signage to highlight all of the trail loops.
- 2. Increase promotional efforts for this trail using regional trails literature and online efforts.
- 3. Explore opportunities to link this trail to proposed cycling routes and other walking routes as indicated in the Recreational Trails Master Plan and through more detailed site investigation.





15.7 Priority Trail Improvement Projects – Township of Selwyn



Priority	Trail Section - Bridgenorth
1.	B.E.L Rotary Bridgenorth Trail – to Peterborough, see A on
2.	Appendix B Bridgenorth Sidewalk Improvement Projects, see Appendix B
3.	Chemong Lions Park – Trails, see Appendix B
4.	B.E.L Rotary Bridgenorth Trail – private lease extension, see G, Appendix B
5.	Chemong Waterfront Park – Trails, see Appendix B
Priority	Trail Section - Ennismore
<u>i fiority</u>	Trail Section - Emiliamore
1.	Trail Improvements and Signage– Ennismore Heritage Trail, see Appendix C
2.	Robert E. Young Rec. Complex – Trails, see Appendix C
3.	Ennismore Waterfront Trail - Private Easement, see Appendix C
4. 5.	Ennismore Sidewalk Improvement Projects, see Appendix C Moloney Line - Unopened ROW, see Appendix C
3.	Moloney Line - Onopelied ROW, see Appendix C
Priority	Trail Section - Lakefield
1.	Isabel Morris Park – Trails, see Park Master Plan
2.	Katherine Street Waterfront Trail Extension, see F Appendix D
3. 4.	Formalize Trail Link, see F Appendix D Trail Link Opportunity, see I Appendix D
4. 5.	Bird Viewing Trail, see J Appendix D
0.	
<u>Priority</u>	Trail Section – Young's Point
1. 2. 3.	Walking Trail, signs only, see Appendix E Trail Improvements, under existing bridge, see C Appendix E Trail Opportunity at Township Fire Hall site, see A Appendix E
J.	Trail Opportunity at Township File Flair Site, See A Appendix E





15.8 Priority Bicycle Route Improvements

Priority



1. 2. 3.	Hilliard Street, Fifth Line to Peterborough, see Appendix F Fairbairn Street, Third Line to Peterborough, see Appendix F Woodland Drive, Hilliard St to Centre Line, see Appendix F
Priority	Road Section – Signed Bike Route
1. 2. 3. 4. 5.	Seventh Line, see Appendix F Fifth Line, see Appendix F Fairbairn Street, see Appendix F Ennis Road, see Appendix F Tara Road, see Appendix F
Priority	Unopened Public Right-Of-Way
1. 2. 3.	Viner Line to Township Gravel Pit, see Appendix F Fairbairn Street, Unopened Sections, see Appendix F Behind Kawartha Lakes Construction, Smith Street to Young's Point Road, see B Appendix D

Road Section - Paved Shoulder

"20 years from now you will be more disappointed by the things you didn't do than by the things you did. So throw off the bowlines. Sail away from the harbor. Catch the trade winds in your sails. Explore. Dream. Discover."

- Mark Twain





15.9 Yearly Priorities

Detailed recommendations and priority projects are provided below. However, it is noted that these are recommendations only and are provided as a starting point. The recommendations will give direction for determining a detailed yearly work plan. It is imperative that the Township and the Recreational Trails Advisory Committee understand that this plan is intended to be flexible and should be relied on for direction and guidance. The Committee will be required to use the suggested priorities below to develop an outline of projects each year for Council's consideration. This list of projects will need to be updated regularly and tracked for record keeping purposes. Celebration of important milestones and accomplishments as the trails system is realized, will be an important part of managing the implementation of this plan.

Year One Priorities (2015):

- 1. Establish the Recreational Trails Advisory Committee;
- 2. Review, measure and recommend any adjustments related to the Plan's objectives on a yearly basis to ensure its effectiveness;
- 3. Recreational Trails Advisory Committee to review, adjust as necessary, and make a recommendation to Council prioritizing a listing of all trail and bicycle route improvement projects provided in this report for year 1.
- 4. The Recreational Trails Advisory Committee to coordinate with partners to encourage the inclusion of Township trails and bike routes in regional maps, promotion material and associated literature.
- 5. Recreational Trails Advisory Committee to make contact with County and City of Peterborough representatives to establish a link between trails, active transportation and cycling representatives from these agencies;
- 6. The Recreational Trails Advisory Committee should be responsible for adjusting the priority list of projects, as necessary based upon works not completed within the current year and prioritizing work to be completed in the future, while following guidelines outlined in the Recreational Trails Master Plan.

Year Two Priorities (2016):

- 1. The Recreational Trails Advisory Committee to recommend to Council, a Year Two Work Plan for implementing priority trail and bicycle route improvement projects;
- 2. Create and recommend to Council, an implementation strategy for Wayfinding and Signage standards for Trails and Cycling;
- 3. Recreational Trails Advisory Committee to meet (or correspond) with County and City of Peterborough representatives to encourage the development of an overall County of Peterborough approach to trails and bicycle route design and regional trail linkage projects;
- 4. Initiate the development of online trails mapping and route information for the Township website through GIS;
- 5. Establish a communication strategy for communication with the public regarding the implementation of the trails master plan and identify local trails and bicycle champions in the specific communities;





- 6. Plan and host at least one public event related to trails and cycling;
- 7. The Recreational Trails Advisory Committee should be responsible for recommending to council the priority list of projects, as necessary, based upon works not completed within the current year and prioritizing work to be completed in the future, while following guidelines outlined in the Recreational Trails Master Plan.

Year Three Priorities (2017):

- 1. The Recreational Trails Advisory Committee to recommend to Council a Year Three Work Plan for implementing priority trail and bicycle route improvement projects;
- 2. Continue to administer the implementation of Trails Wayfinding and Signage improvements as approved by Council;
- 3. Develop a Trails Education Plan incorporating the responsible use of bicycles and trails;
- 4. Continue discussions, as appropriate, with private landowners where lease requirements are necessary to pursue trail and bicycle route improvement projects;
- 5. Continue to administer communication strategy with the public regarding the implementation of the trails master plan and to identify local trails and bicycle champions in the specific communities;
- 6. Continue to administer coordination and updates for the online trails mapping and route information on the Township website through GIS - also use the website to identify local trails and bicycle champions for each specific community;
- 7. The Recreational Trails Advisory Committee should be responsible for recommending to Council to adjust the priority list of projects, as necessary, based upon works not completed within the current year and prioritizing work to be completed in the future, while following guidelines outlined in the Recreational Trails Master Plan.

Year Four Priorities (2018):

- 1. The Recreational Trails Advisory Committee to recommend to Council a Year Four Work Plan for bicycle implementing priority trail and route improvement projects;
- 2. Continue to administer the implementation of Trails Wayfinding and Signage improvements as approved by council;
- 3. Plan and host at least one public event related to trails and cycling;
- 4. Continue discussions, as appropriate, with private landowners where lease requirements are necessary to pursue trail and bicycle route improvement projects;
- 5. Continue to administer communication strategy with the public regarding the implementation of the trails master plan and to identify local trails and bicycle champions in the specific communities:
- 6. The Recreational Trails Advisory Committee should be responsible for recommending to council the priority list of projects, as necessary, based upon works not completed within the current year and prioritizing work to be completed in the future, while following guidelines outlined in the Recreational Trails Master Plan.



MULTIMODAL BRIDGES

City of Ottawa, Ontario

Ottawa's numerous bridges serve thousands of cyclists and pedestrians every day. In recent years the city has upgraded older bridges with bike lanes and wide sidewalks, included bike lanes and off-road paths on new bridges, and opened the landmark Corktown Footbridge across the Rideau Canal.

For more information, see www.ottawa.ca.



Year Five Priorities (2019):

- 1. The Recreational Trails Advisory Committee to recommend to Council a Year Five Work Plan for implementing priority trail and bicycle route improvement projects;
- Plan and host at least one public event related to trails and cycling and; a second public
 event to celebrate the accomplishments for the work done on trails and trails related projects
 in Selwyn for the last five years and with an emphasis on identifying local trails and bicycle
 champions in each specific community;
- 3. Develop a signage plan for environmental education and interpreting natural and cultural heritage features along trails;
- Continue to administer communication strategy with the public regarding the implementation of the trails master plan and to identify local trails and bicycle champions in the specific communities;
- 5. The Recreational Trails Advisory Committee should be responsible for recommending to Council to create a five year phasing plan that will guide the Township in the next phase of development and implementation. Projects should be itemized based upon works to be completed with priorities identified.

DEMONSTRATING LEADERSHIP

City of Toronto, Ontario

The City of Toronto partnered with Green Communities Canada to co-host the 2007 Walk21 Conference. The city adopted a Pedestrian Charter in 2002, supports cycling and pedestrian advisory committees, and coordinates an annual Bike Week that grew into Bike Month in 2008. Staff members are working to implement a five-year, \$30-million cycling infrastructure plan. The city is also creating a new public realm unit to improve pedestrian infrastructure while it develops a comprehensive Walking Strategy framework.

For more information, see

www.toronto.ca/cycling and www.toronto.ca/walking.







16.0 Next Steps

- 1. Council to receive and endorse the Township of Selwyn Recreational Trails Master Plan;
- Ad Hoc Trails Advisory Committee to develop a Terms of Reference, including a Vision Statement for the Recreational Trails Advisory Committee, who's term will begin in 2015. Development of Terms of Reference for Recreational Trails Advisory Committee to consider:

i. Committee Composition

Ensuring representation from all Wards, existing Trail groups and other potential stakeholders.

ii. Stakeholder Input

Allowance for additional stakeholder representation depending on the Yearly Priority (e.g. additional membership or subcommittee to implement a site/Ward specific project).

iii. Coordination with Stakeholders/ other Township departments

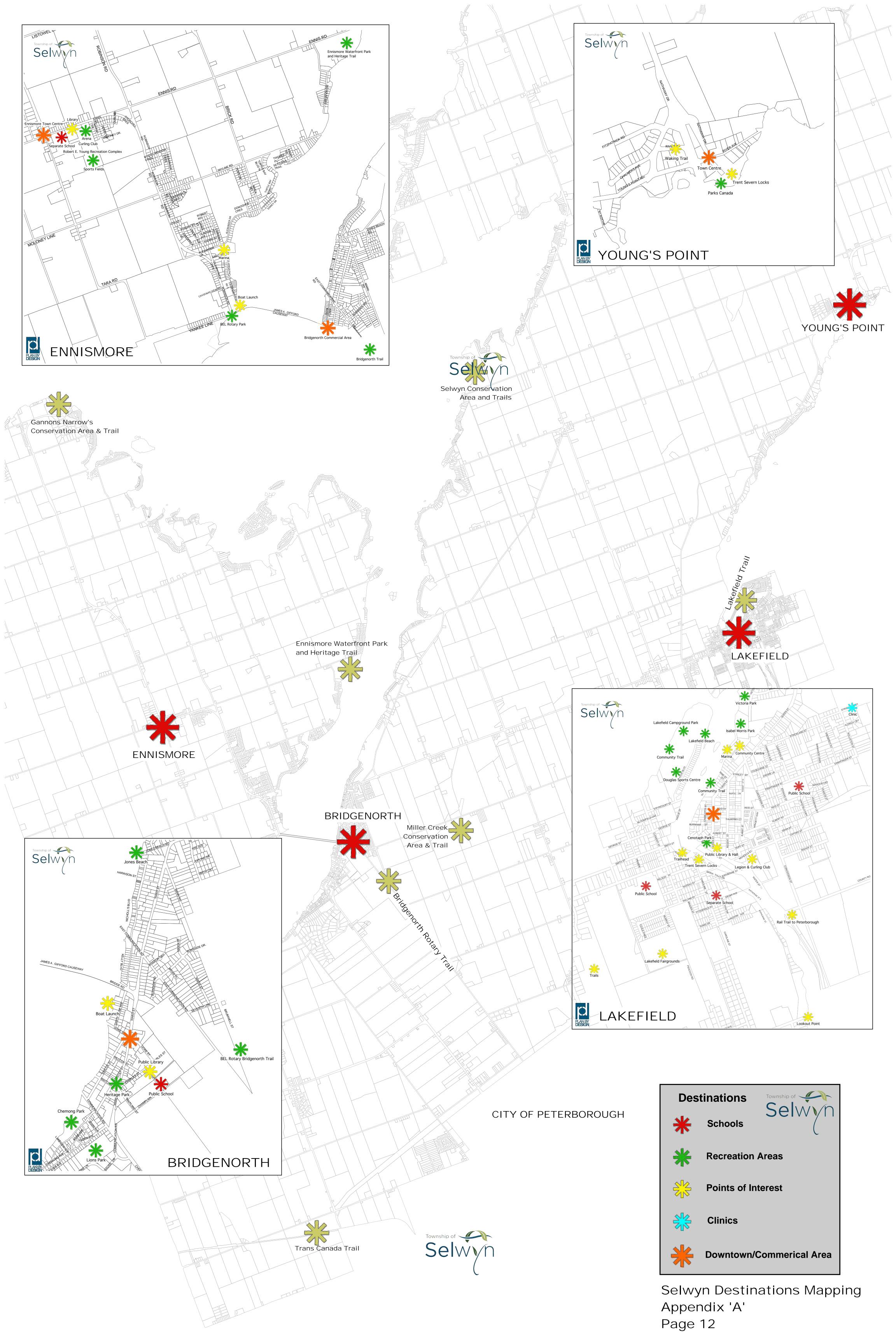
Identify a mechanism to coordinate with Public Works, Planning and the County and City of Peterborough to ensure that trail development aligns with projects that these stakeholders manage (e.g. road reconstruction, plans of subdivision).

iv. Reporting

Identify reporting mechanisms (e.g. minutes, recommendations forwarded to Council for budget consideration).

3. The County and City of Peterborough to receive a copy of the final Recreational Trails Master Plan and notification that the Township will be seeking their input on further projects, acting as a resource for the Recreational Trails Advisory Committee.





Recommended Trail Improvement Projects - Bridgenorth

On Road Bicycle Routes - Paved Shoulders / Bike Route Signage

Seventh Line - B.E.L. Rotary Bridgenorth Trail Trailhead , to Otonabee River Edge (Lakefield)

Mann Road - Ward Street, to B.E.L. Rotary Bridgenorth Trail Trailhead

Chemong Road - Downtown Bridgenorth Limits, to Fifth Line

Fifth Line - Chemong Road, to Hilliard Street

Hilliard Street, Fifth Line, to City of Peterborough

Sidewalk - 1.8m wide Concrete

East Communication Road, Ward Street, to Seventh Line

Seventh Line East Communication Road, to Mann Road

Gore Street - Ward Street, to Charles Street

Charles Street, Gore Street, to Ward Street

(Portions of, see map for location) Westlake Road, Westlake Drive, Denne Lane, Hatton Ave, Hunter Street, Simcoe Street, Kelly Blvd, Nicholas Blvd, Harrison Street, Ward Street, to Jones Beach Road & Jones Beach

Off Road Trails – Gravel Surface 1.8m wide (see map for key to trail sections)

A – B.E.L. Rotary Bridgenorth Trail Improvements

D – East Communication Road – Unopened ROW

G – Private Lands – Gravel Pit (Bridgenorth Trail Extension)

E –Mann Ave – Eighth Line, to Selwyn Road

On Road – Shared Hike/Bike Route (signs only)

F – Fifth Line – Unopened Portion ROW

Pedestrian / Bicycle Bridge - Separated

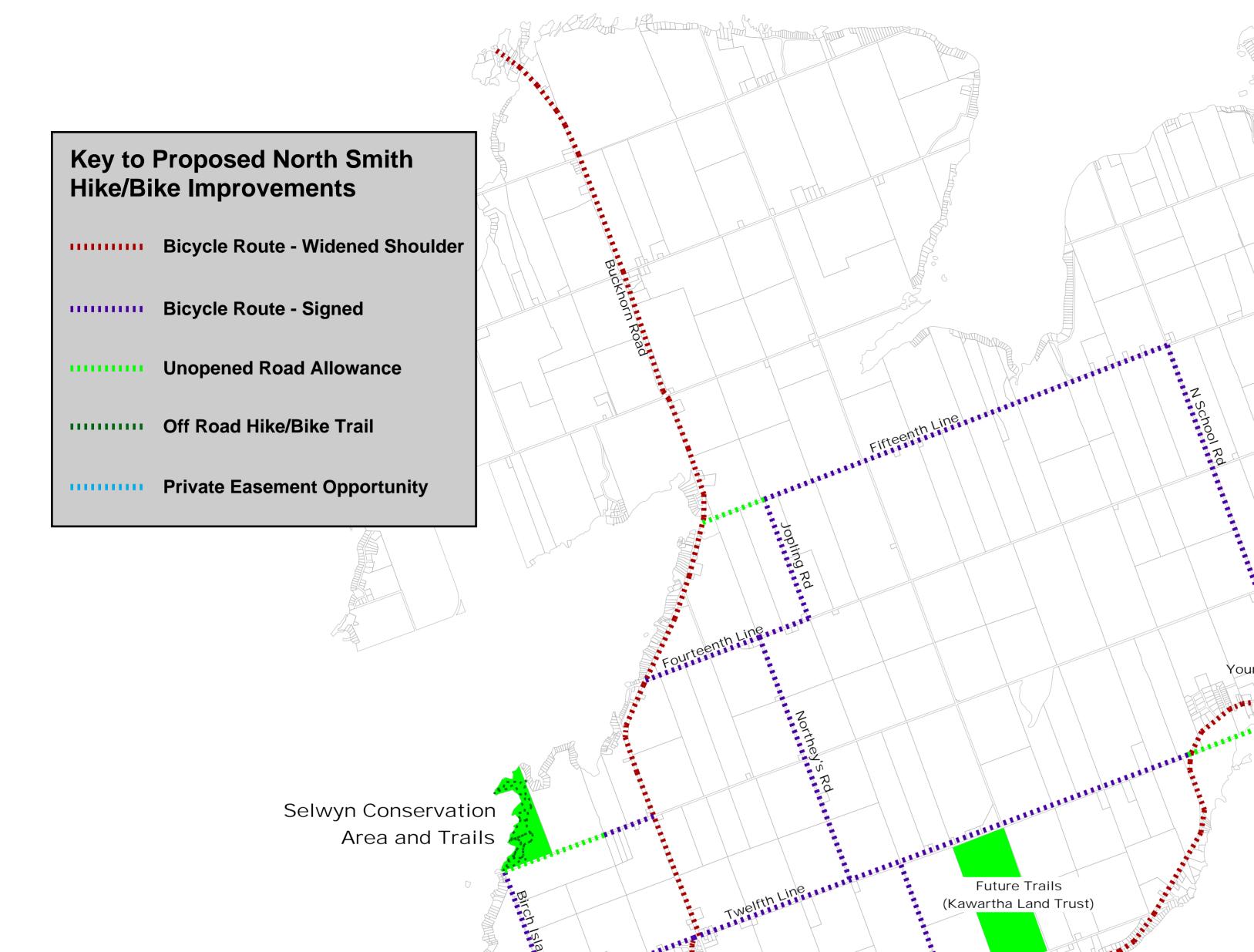
James A. Gifford Causeway

B - Chemong Lions park

C – Chemong Waterfrot Park

Key to Proposed Bridgenorth Hike/Bike Improvements On Road Cycling Improvements Downtown Streetscape Improvements (per CIP 2012) Shared Bike/Hike (on road) Keyed Private Easement Opportunity Keyed Trail Opportunities Existing Trails / Sidewalk Separated Sidewalk/Bicycle Facility Sidewalk





P

Township Recreational



Existing Gravel Pit - Trails
Opportunities at Reclamation

Lakefield

Trail

Appendix 'C' Pages 16 & 17





Appendix 'D' Pages 19 & 20

Pages 24 & 25



