



Renfrew
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Bridging Charm and Convenience



Town of Renfrew Master Transportation Plan

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1.0 INTRODUCTION

The Town of Renfrew (Town) has identified the need for the expansion of the transportation network to serve development needs over the next 20 years and beyond. Closures of the CN and CPKC Railway corridors, as well as the planned Highway 417 freeway extension from Arnprior to Renfrew, will continue to accelerate growth in the Town.

A comprehensive and sustainable transportation plan is essential for the municipality to:

- Continue to plan for efficient development.
- Plan for the rehabilitation and replacement of existing infrastructure.
- Establish consistent transportation standards.

The Master Transportation Plan (MTP) (this report) prioritizes the implementation of transportation infrastructure and Active Transportation infrastructure for short-term, medium-term and long-term planning horizons to address existing and future capacity demands.

This (MTP) provides an outline of a staged plan for programs, policies and projects which will improve existing transportation infrastructure within the Town. The study area is in **Figure 1** and is not limited to the Town municipal boundaries.

In partnership with stakeholders (such as the County, local surrounding municipalities, and the Ministry of Transportation), the study developed and reviewed potential programs, policies and projects to improve infrastructure and connectivity and to promote safety throughout the Town. Benefits of implementing the plan include:

- Opportunities to support local businesses and grow the eco-tourism industry in the Town.
- Improvements to the aesthetics, traffic operations, and safety of existing transportation facilities.
- An environmentally sustainable and healthier community.

The MTP is proposed as a living document that will serve as a general guide and will evolve over time to satisfy changing needs, opportunities, and priorities within the Town.

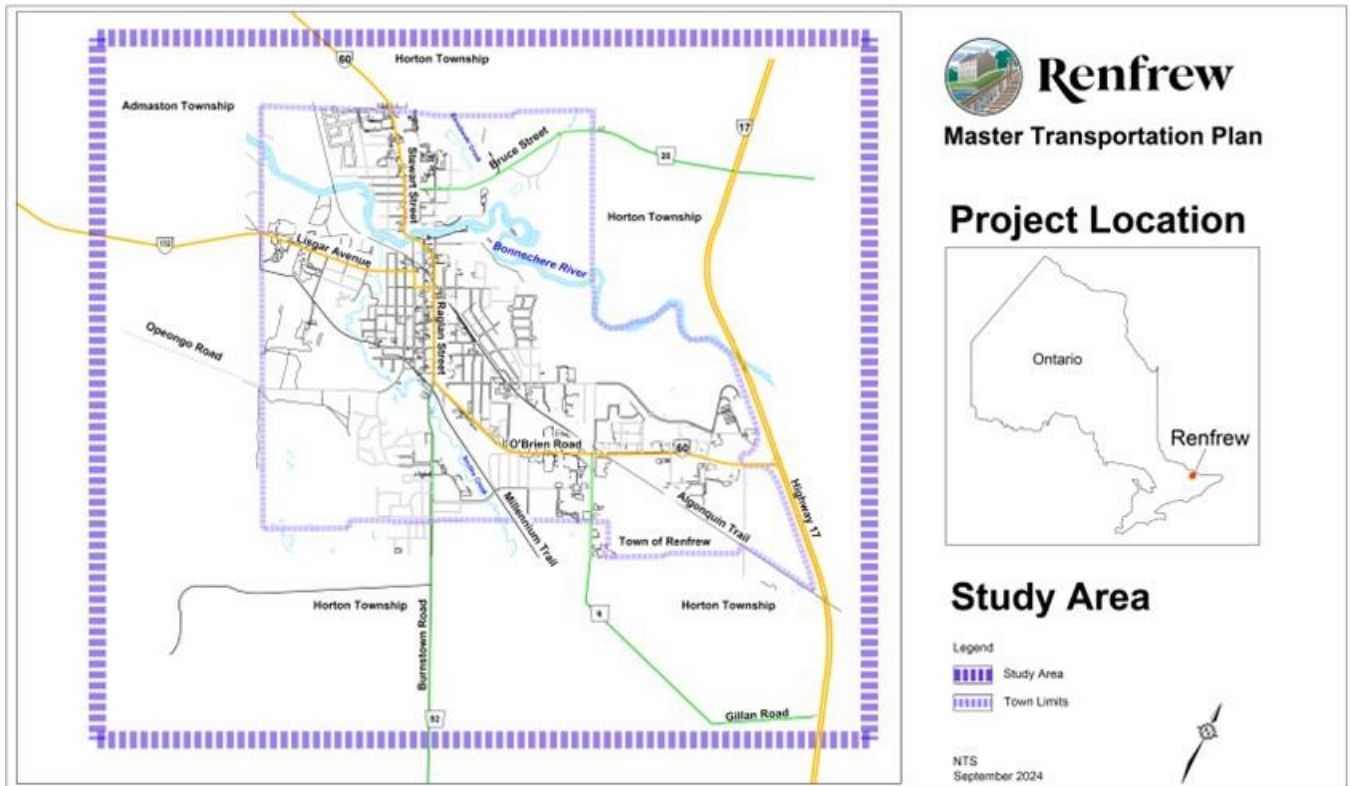


Figure 1: Study Area

2.0 GOALS AND OBJECTIVES

The primary goal of the MTP is to define a long-term vision for all modes of transportation by identifying the projects, programs, and policies that will transform the transportation network for a 20-year horizon and beyond while improving the quality of life for the Town's residents.

A key component to achieving healthier and more sustainable communities is ensuring adequate facilities are in place to accommodate active modes of transportation, such as multi-use paths (MUP), bicycle lanes, sidewalks, cross walks, and more. Additional goals for improving infrastructure, accommodating demand and promoting Active Transportation within the Town through the implementation of supporting programs, policies and infrastructure as identified in the MTP include:

- A vibrant economy that supports local businesses through an expanded tourist industry.
- Promoting healthier lifestyles within our community through increased physical activity such as walking and cycling to improve community health outcomes.
- A healthier natural environment and improved air quality with decreased greenhouse gas emissions and pollution.
- Improved accessibility for individuals of all ages and abilities.
- Improved safety for all modes of travel, through adopting a Complete Streets approach to future transportation projects.

Objectives of the MTP include:

- Ensure the TMP meets the current and future transportation needs of the Town by estimating future population and economic growth.
- Improve and expand active transportation facilities including sidewalks, pedestrian crossings, MUP, bicycle lanes, and existing trail networks.
- Increase parking supply and utilization in the downtown core.
- Improve traffic operations at key intersections.
- Improve the safety and connectivity of the road network for all modes of transportation within the Town overall.

3.0 FORECAST TRAFFIC AND SCREENLINE ANALYSIS

The forecast traffic within the Town of Renfrew was reviewed for the 20+ year horizon. The review included previous studies and a screenline analysis of the volume-capacity ratios. (A screenline is an imaginary line (such as a roadway or river) across which the directional traffic count volumes are compared.) The Watson & Associates Development Charges Background Study (October 2021) forecast to mid 2040 approximately a 1,500 increase in population (i.e. approximately 10,000 in 2040, which reflects a 1% growth rate).

The MTP (this Study) has reviewed three growth rates: a low, medium and high rate, based on the development and growth areas within the Town. Higher growth rates are expected to coincide with the freeway extension of Highway 17 which occurred in other Towns such as Arnprior and Carleton Place when Highway 417 was extended. The growth areas in the Town are illustrated in **Figure 2**.



Figure 2: Town of Renfrew Growth Areas

The growth scenarios considered the following populations in 2041:

- Low growth rate of 10,000 (historical growth and Development Charges Background Study);
- Medium growth rate of 12,500; and
- High growth rate of 15,000.

The growth scenarios are in **Figure 3**.

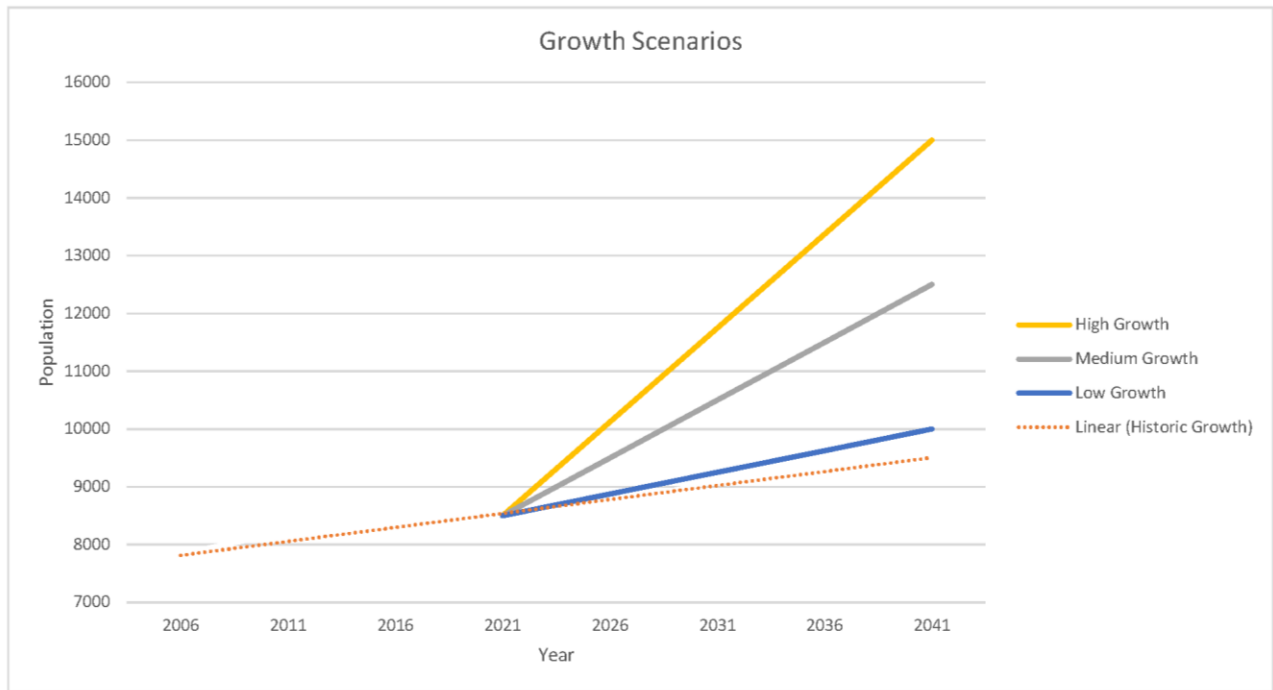


Figure 3: Growth Scenarios

A screenline analysis was completed that included counts to define existing traffic demand and to estimate the capacity in the existing transportation network. The analysis included the collection of turning movement counts (TMC) and Automatic Traffic Recorder (ATR) counts at key locations within the Town. The TMC and ATR counts were used to determine the volume capacity ratio (V/C ratio) of the existing network and to aid in the identification of future priorities within the Town. The conclusions of the screenline analysis include:

- The Town relies upon three intersections for access to Highway 17. These intersections will become interchanges when Highway 417 is extended to the Town.
- Additional traffic capacity is required across the Bonnechere River.
- The southeast and southwest development areas require east-west links to increase capacity and supports a new boundary collector road.
- Northeast development area requires additional capacity across the Bonnechere River and supports a new boundary collector road.
- The expansion of O'Brien Road/Hall Avenue extension/Barnet Boulevard extension should be prioritized.
- Improve the efficiency of Raglan/Hall/Veterans Memorial intersection with linkage to Opeongo Road and simplify the geometry.
- Modification to the existing Highway 132 connectivity would improve connectivity and capacity within the Town.

The screenline analysis summary is in **Figure 4**.

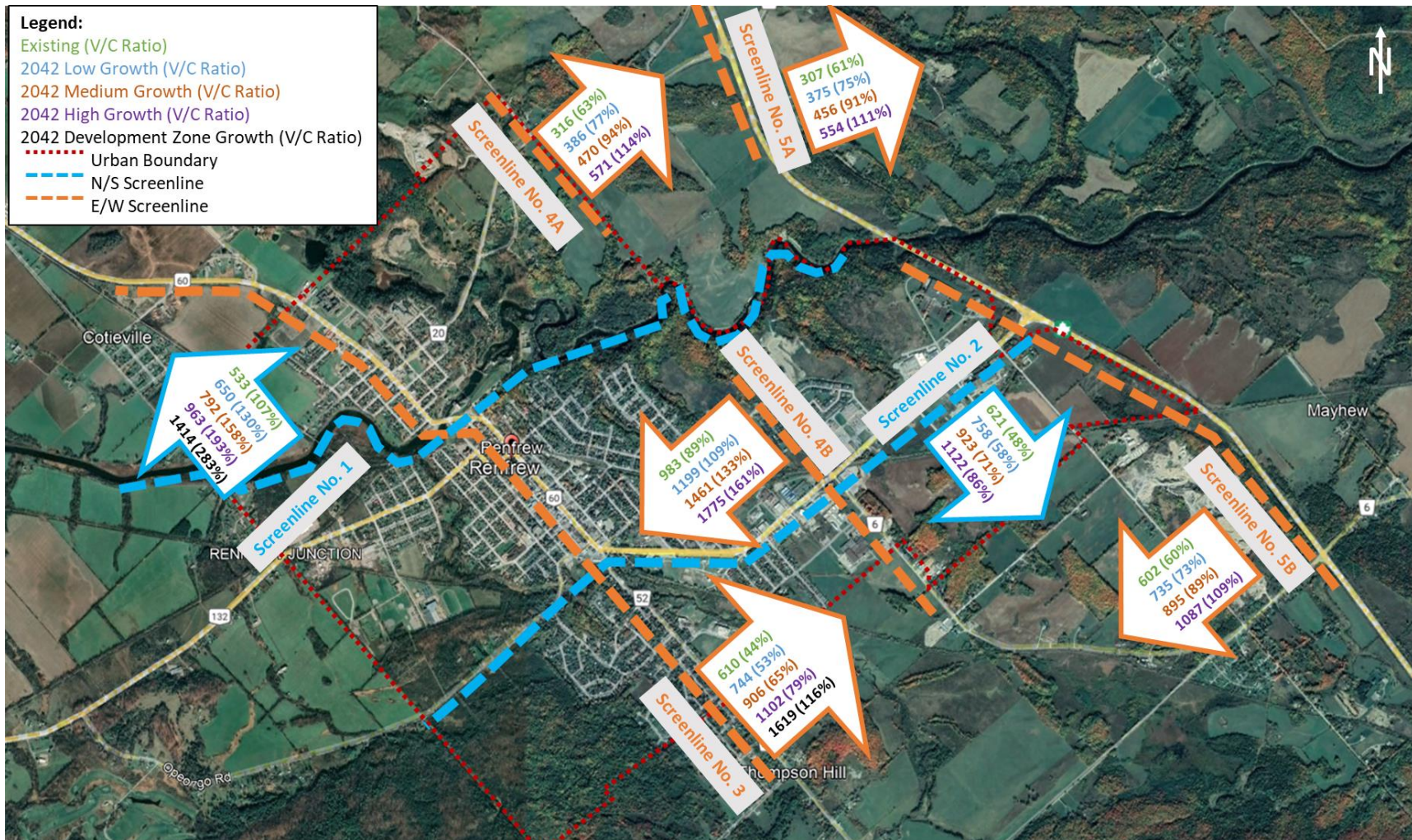


Figure 4: Screenline Analysis and V/C Ratios

4.0 TOURISM

Tourism in the Town is driven by many industries, namely:

- Vacation homes/cottages;
- Outdoor activities (camping/fishing/hunting/hiking);
- Algonquin Park;
- Whitewater Paddlesports (Ottawa, Madawaska, Coulonge, Noire, Dumoine, Petawawa, etc.);
- ATV/Side by Side/Snowmobiling (Alg. Trail/Millen. Trail/K&P);
- Local food production and processing (maple syrup, craft beer/wine, coffee roasting, other on-farm diversification); and
- Events (fairs/races/music festivals/sports tournaments, etc.).

These drivers significantly affect the transportation system. The development of alternatives for network improvements considered these tourism industries in the Town. These included: expanding the existing transportation and active transportation network, including widened roads, and new sidewalks and multi-use paths; new parking lots and signage for trails and parks; and improvements to existing intersections for operations and safety.

The Economic and Community Development Office (EDCO) works with Regional Partners to deliver investment and attraction programs for the Town. The Department also provides information and services to help businesses grow and prosper in Renfrew. The Town's Master Plan for Parks, Recreation and Culture's Mission Statement is:

"It is the aim of the Town of Renfrew Recreation Department together with our citizens, neighbours and community partners, to take a leadership role in developing a network of programs, activities, services, special events and facilities that will inspire people to participate in a range of opportunities and experiences that foster a strong and vibrant community spirit.¹"

The Town is a part of the province-wide cycling network developed as a component of Ontario's Cycling Strategy "CycleON". The MTP will implement several initiatives to improve the safety, connectivity, and accessibility of active transportation facilities including the existing trail networks in the Town (i.e., Algonquin Trail and Millennium Trail).

In addition, the MTP will improve the connectivity of the transportation network of the Town and surrounding areas, including improving connectivity to the Trans-Canada Highway (Highway 17). Improving the transportation network in the Town will:

- Attract visitors and tourists to the Town.
- Support local businesses and stimulate the economy.
- Expand and improve the traversable road network throughout the Town.

¹ Town of Renfrew Master Plan for Parks, Recreation and Culture <https://www.renfrew.ca/uploads/RENFREW-FINAL-REPORT-July-22-2010.pdf>

5.0 HEALTH

The Canadian Association of Physicians for the Environment has identified that “chronic diseases such as heart disease and diabetes are rising across Canada at alarming rates.” The health benefits of physical activity; reducing the risk of heart disease, high blood pressure, diabetes and obesity; are clear and well known, illustrated in **Figure 5**. Most Canadians, however, are not physically active enough to achieve those benefits which results in billions of dollars in additional health care costs in Canada annually. Many people are too busy to find time to exercise by going to the gym or participating in sports, but using active modes of transportation builds that physical activity into our everyday life. Each hour per week of moderate or vigorous physical activity, such as walking or cycling, is associated with a 4%-9% reduction in the risk of death from all causes.

Cycling, walking, and other active modes of transportation offer an opportunity to become physically active while completing travel trips that may otherwise have relied on an automobile.

Any programs, policies and projects that result in an increase in the number, frequency and duration of trips using active modes of transportation will result in a corresponding improvement in health indicators, a reduction in health care costs to society and an overall reduction in premature death.

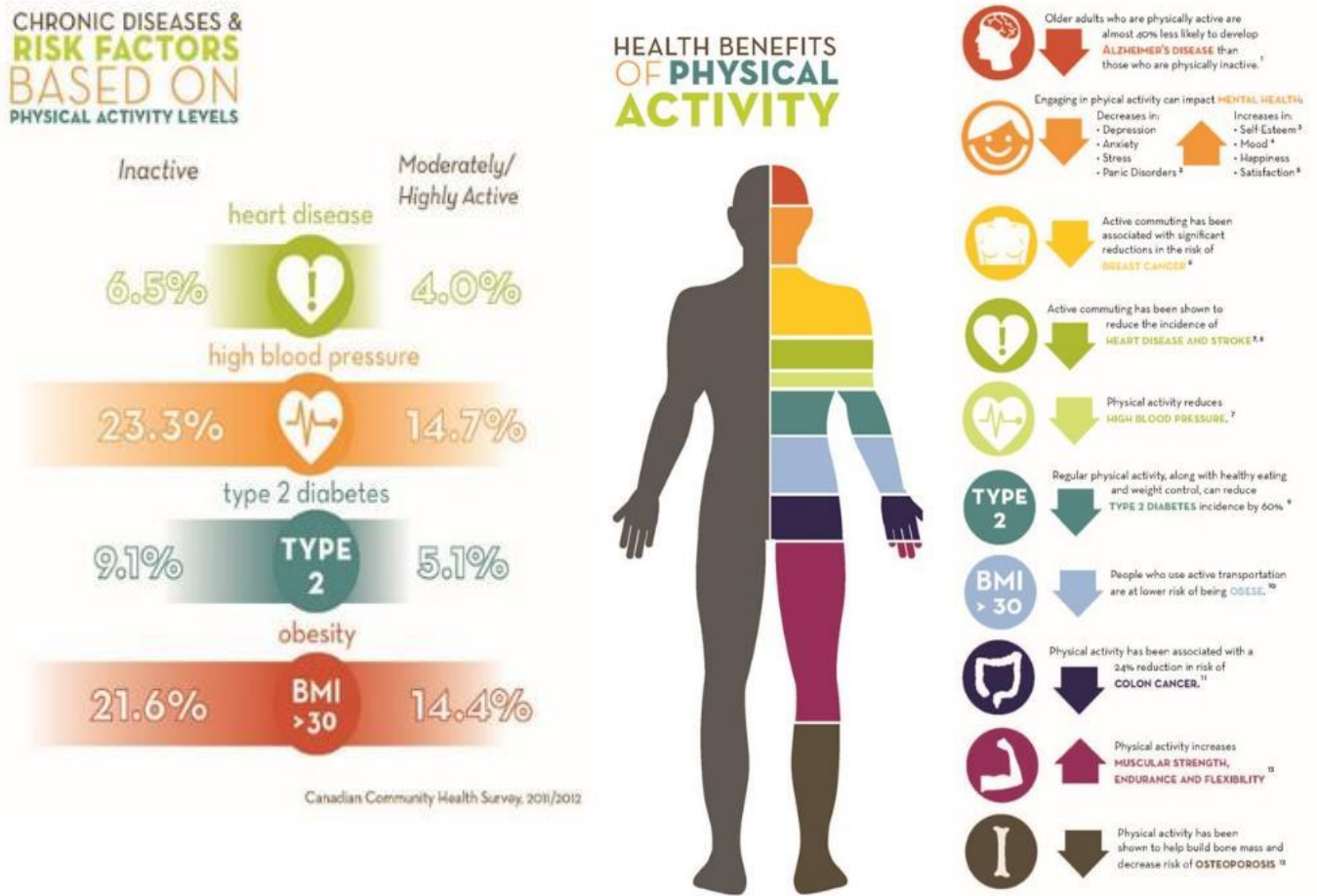


Figure 5: Chronic Disease and Health Benefits of Physical Activity

6.0 SAFETY

Regular physical activity such as walking and cycling can have a substantial impact on improving health and life expectancy. Ontarians, however, not only need to walk and cycle, but they also need to be able to walk and cycle safely. One of the greatest obstacles to promoting Active Transportation, and increased walking and cycling can be a perceived lack of safety for pedestrians and cyclists. MTO data shows that the largest proportion of vehicle collisions with cyclists and pedestrians (over 65%) occurs at intersections.

Concern for the safety of pedestrians and cyclists led the Office of the Chief Coroner for Ontario to complete a Pedestrian Death Review and a Cyclist Death Review. The Pedestrian Death Review, released in 2012, identified:

- Pedestrians over 65 years of age accounted for a disproportionate share of pedestrian fatalities (13.2% of the population but 36% of the fatalities).
- Peak hours for pedestrian collisions were between 2:00 pm and 10:00 pm, largely coinciding with peaks in traffic volumes.
- 76% of pedestrian fatalities occurred in urban areas and 24% in rural areas.
- Five circumstances accounted for 70% of pedestrian deaths:
 - Pedestrians hit at a mid-block location while crossing (31%).
 - Pedestrians hit on the sidewalk and/or shoulder of the road (14%).
 - Vehicle going straight through the intersection while the pedestrian crossed without right-of-way (11%).
 - Vehicle turning left while the pedestrian crossed with right-of-way at the intersection (7%).
 - Vehicle turning right while the pedestrian crossed with the right-of-way at the intersection (7%).

The Pedestrian Death Review (2012) recommendations included:

- That a “Complete Streets” approach be adopted to guide development. Complete Streets is designed to be safe, convenient, and comfortable for every user regardless of travel mode, physical ability or age (See page 14 for a detailed description of the Complete Streets approach).
- Proposed amendments to the Highway Traffic Act including allowing municipalities to erect non-signalized pedestrian crossings in midblock areas.

The Cycling Death Review (2012) found that of the fatalities:

- 86% were male.
- 78% were struck by an automobile.
- 65% occurred in urban environments.
- 53% occurred during daylight conditions.

Recommendations from the Cycling Death Review included:

- Adoption of a “Complete Streets” approach focused on the safety of all road users.
- A comprehensive cycling safety public awareness and education strategy.
- Establishing a “one-metre” rule for vehicles passing cyclists.
- Prioritizing the development of paved shoulders on provincial highways.

Research shows that there are two main requirements to improve the safety of pedestrians and cyclists:

- 1) Designated pedestrian and cyclist infrastructure that is safe and designed to enhance the user’s experience.
- 2) More pedestrians and cyclists to create a “safety in numbers” effect.

7.0 STUDY PROCESS

The study was undertaken as a Master Plan according to the Municipal Class Environmental Assessment (MCEA, 2015) and satisfies Phases 1 and 2 of the MCEA Process, illustrated in **Figure 6**.

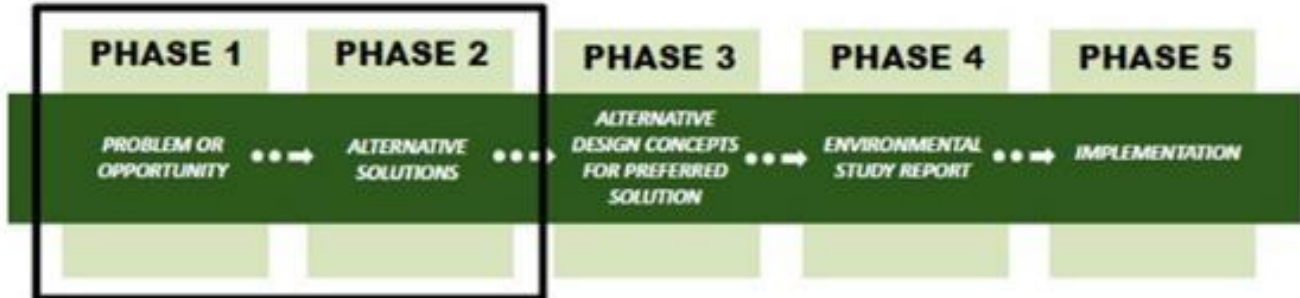


Figure 6: Phases 1 and 2 of the MCEA Process

Master Plans are long range plans which integrate infrastructure requirements for existing and future conditions with environmental assessment planning principles. The MTP was initiated in June 2022. BT Engineering Inc. was retained by the Town to develop a comprehensive Master Plan that would accomplish the following:

- Identify potential **projects** in the form of road and Active Transportation links, including the expansion and improvement of existing infrastructure as well as recommending new trail and roadway facilities, culminating in an improved Active Transportation and transportation network.
- Identify potential **policies** that can foster and increase road safety for all users, communal knowledge of safe transportation practices, and ease transportation through the Town for all modes.
- Identify potential **programs** that can improve awareness and education of safe and healthy ways of getting around in the Town.

Phase 1 included a comprehensive review of background studies, reports and existing infrastructure and mapping provided by the Town related to road, bridge and Active Transportation studies. Phase 1 culminated in the production and distribution of a Study Design report. The Study Design is provided in **Appendix A**. The Study Design defined the vision, objectives, consultation strategy and summarized existing routes and background study material.

Phase 2 implemented the Study Design. The Project Team, with input from key stakeholder groups and the general public, developed the following:

- A long list of potential policies and programs, see **Appendix C**.
- A long list of potential projects utilizing a variety of transportation and Active Transportation infrastructure for public review and comment. The long list of potential projects is in **Appendix D**.

8.0 CONSULTATION

The MTP was completed following the Municipal Class EA process (Phases 1 and 2) by establishing the need and justification for the project, considering all reasonable alternatives with acceptable effects on the natural, social and cultural environments, and proactively involving the public in defining a recommended plan for improvements.

8.1. Public Open House No.1/Community Café Event

A joint Public Open House and Community Café was an initial event to facilitate conversation by providing participants with a comfortable and welcoming environment. The event was organized to create a network of dialogue about issues that matter to stakeholders and members of the community. The meeting was held on Wednesday, June 29, 2022, at the myFM Centre (formerly the Ma-te-Way Activity Centre) in Renfrew, Ontario. The POH portion of the event is typically a set of exhibits displayed around the perimeter of the room, with consultant and Town staff available to answer questions from the public. The Community Café portion of the event included a short presentation followed by small group discussions using the methodology of the World Café (see www.worldcafe.com). The Community Café includes question prompts to initiate the conversation between attendees, but the group is mostly left to discuss issues and alternatives without the influence of the study team.

Attendees were encouraged to provide a written response to any issues or concerns or provide verbal comments at the Café. One person submitted a written comment. All members of the public and interest groups were invited to the POH/Community Café to view the presentation material and discuss the project as a group.

The three topics that were chosen to be discussed during the event included the following:

- Roads/Bridges
- Active Transportation
- Programs and Policies

The POH No. 1/Community Café (see **Photo 1**) was successful in creating an open dialogue for residents and interested parties to identify issues within the Town.

Based on the comments received and level of involvement, the public supports the long-term planning goals of the Master Transportation Plan. The POH No. 1/ Community Café Summary Report is in **Appendix B**.



Photo 1: POH No. 1/Community Café Event

8.2. Public Open House (POH) No. 2

POH No. 2 (see **Photo 2**) was held on Wednesday, March 27, 2024, from 6:00 to 8:00 pm (drop-in format) at the myFM Centre in Renfrew, Ontario.

The POH presented the following:

- Evaluation of the current state of the transportation network and response to future demands.
- Identification of future traffic demand from Provincial, County and local area growth.
- Identification of transportation network improvements required for future needs.
- Capital implementation plan.
- Future projects and timing of implementation (for projects in the 20-year horizon, or beyond).
- Next Steps.

The public was supportive of the long-term planning goals and short, medium and long-term recommendations of the MTP.

The POH No. 2 Summary Report is in **Appendix B**.



Photo 2: POH No. 2 Event

8.3. Key Stakeholders

Key stakeholders that participated in the study included numerous Town staff, neighbouring municipalities and interest groups. A full list of stakeholders that were consulted can be found in **Appendix B** and include:

- Renfrew County District School Board
- Renfrew County Catholic District School Board
- Renfrew and Area Chamber of Commerce
- Renfrew County Joint Transportation Consortium
- Local businesses
- Ontario Clean Water Agency
- Eastern Ontario Public School Board
- Ontario Municipal Water Association
- Centre East Catholic School Council
- Renfrew Business Improvement Association
- Renfrew County ATV Club
- Township of Horton
- Township of Admaston/Bromley

The following agencies are key stakeholders of the MTP:

- Ministry of Municipal Affairs and Housing
- Ministry of the Environment, Conservation and Parks
- Ministry of Agriculture, Food and Rural Affairs
- Ontario Provincial Police
- Ministry of Infrastructure
- Ministry of Indigenous Affairs
- Ministry of Tourism, Culture and Sport
- Ministry of Natural Resources and Forestry
- Ministry of Community Safety and Correctional Services
- Ministry of Energy
- Ministry of Community and Social Services

The following Indigenous Communities are key stakeholders of the MTP Study:

- Algonquins of Ontario (AOO)
- Alderville First Nation
- Curve Lake First Nation
- Hiawatha First Nation
- Bonnechere Algonquin First Nation
- Mississaugas of Scugog Island First Nation

9.0 EXISTING FACILITIES

The Town is located on Bonnechere River in the County of Renfrew, approximately one hour west of Ottawa. The Town is largely an urban settlement area, and the surrounding area and Townships are largely rural in nature. The Town extends over 13 km² with a population of 8,500 people.

There are currently three bridges over the Bonnechere River in operation in the Town:

- Highway 60/ Raglan Street crossing.
- Swinging pedestrian bridge.
- Highway 17 crossing.

The transportation network includes several town roads, three provincial highways that are under the jurisdiction of the MTO (Highway 17, Highway 60, and Highway 132), and three county roads maintained by the Town (Bruce Street, Gillan Road, and Raglan Street South (County Road 52)).

Highway 17 provides connection to the Town of Renfrew between eastern and western Canada. The provincial highway became the primary means of travel from both east and west to the Town when the rail corridor between Ottawa and North Bay was decommissioned. Highway 17 is an important component of economic growth in the Town.

9.1. Active Transportation

Algonquin Trail is the subsection of the Ottawa Valley Recreational Trail in the County of Renfrew. Algonquin Trail currently connects from the southeast quadrant of the Town to the northwest quadrant. The entire Ottawa Valley Recreational Trail is 296 km long and traverses as far north as Mattawa and further south of Renfrew to Smith Falls. The recreational trail attracts residents and tourists and accommodates activities including hiking, cycling, and cross-country skiing. Off-road facilities are used by residents and tourists to travel throughout the Town by Active Transportation (such as cycling) with some sidewalk connections within settlement areas.

The Millennium Trail is an additional recreational trail that connects to the Kingston and Pembroke (K&P) trail at the Town border and traverses south to the Town of Arnprior. The trail is approximately 3.4 km long. The Millennium Trail accommodates pedestrians, cyclists, ATVs, and cross-country skiers.

The Town has recognized the need to improve pedestrian and cycling facilities. The suitability of a roadway for cyclists to share with motor vehicle traffic is dependent on a variety of factors including: traffic volumes, traffic speeds, roadway geometry and surface type.

Improving the connectivity of the trail network and providing parking at trailheads to allow convenient access, are included in the strategies to support active transportation more fully.

Recreational Facilities

The Town has several parks and recreational areas, shown in **Photo 3**, including Ma-te-Way Park, which is a multi-use recreational facility. Recreational amenities at Ma-te-Way Park include a splash pad, a track field, a community centre, and multiple tennis courts.



Photo 3: Parks and Recreational Areas

10.0 INDIGENOUS HISTORY

This chapter recognizes the long historical use of Ottawa Valley as part of the traditional land of Indigenous Peoples. Indigenous Peoples have a history of thousands of years as they evolved from early hunters and gatherers in North America to the current day Indigenous Peoples. The two figures (Figure 7 and Figure 8) illustrate the occupation of the area when the first European settlers arrived (1755 drawing).

The Ottawa River and the surrounding area was home to the Algonquins of Pikwakanagan Indigenous Peoples for at least 8,000 years before European settlers arrived in 1820. The Algonquins utilized the Ottawa River and its surrounding tributaries as a major travel route.

In addition, the Alderville First Nation, Mississaugas of Scugog Island First Nation, Hiawatha First Nation, and Curve Lake First Nation have a history of utilizing the area. This included hunting, trapping, fishing, and using the river as a means of travel.



Figure 7: Occupation of the Area when the First European Settlers Arrived (Canada)

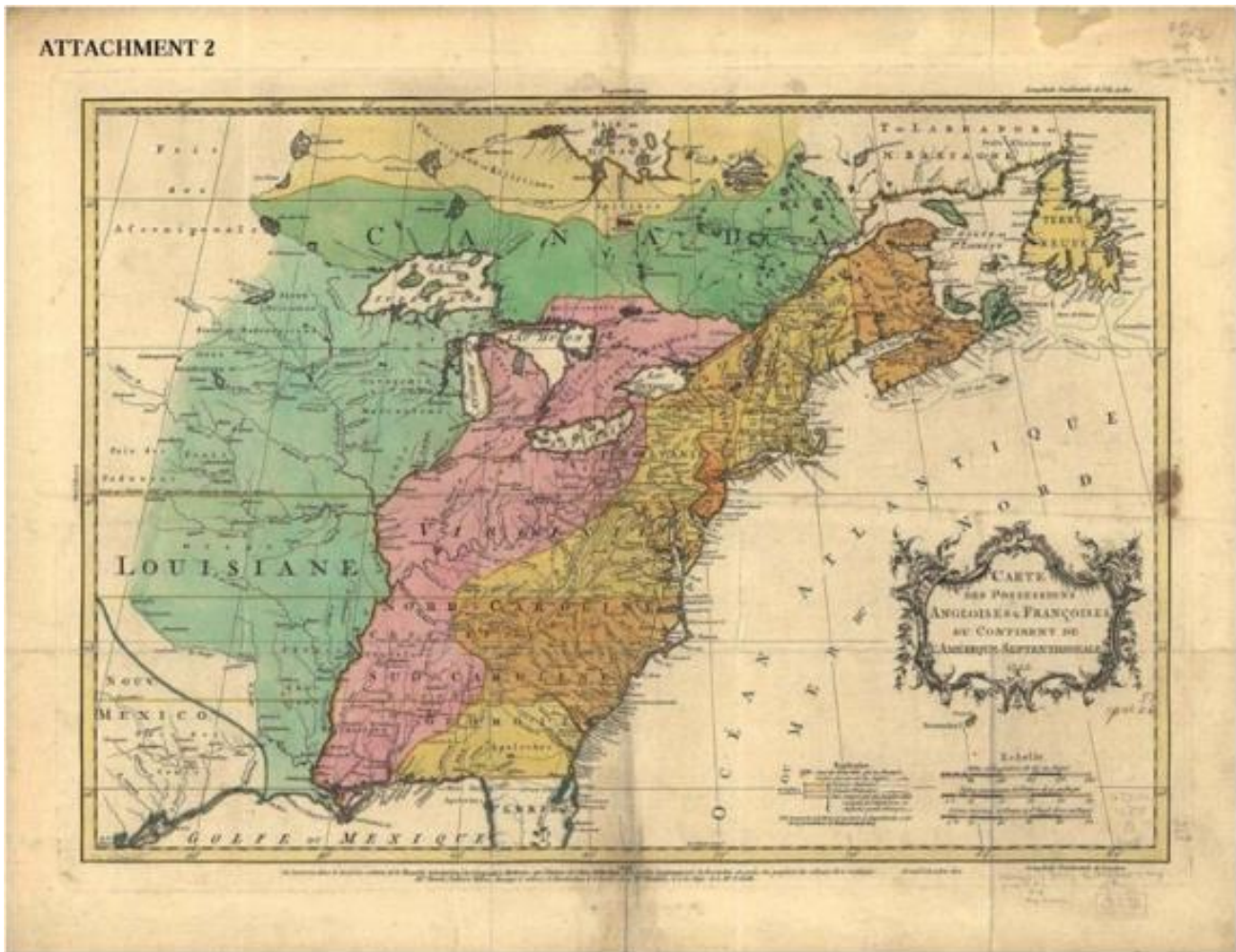


Figure 8: Occupation of the Area when the First European Settlers Arrived (North America)

11.0 GENERATION OF ALTERNATIVES

Alternative projects, programs and policies were developed as part of the MTP to create a long-range plan for roadway and bridge improvements as well as Active Transportation (walking, cycling, and paddling) within the Town. Key principles that were considered were that each alternative should be **safe, accessible**, and should **connect to places people want to go**. The initial list of potential facilities was expanded through a joint POH/Community Café event, public consultation meetings and discussions with agencies and stakeholders. A long list of projects included roadway standards, multi-use paths, bridge improvements, and Active Transportation facilities including parking lots. The Long List of Potential Programs and Policies is in **Appendix C** and the Long List of Potential Projects is in **Appendix D**.

Cyclist behaviour varies depending on the skill and experience of the cyclist, see **Table 1**. Active Transportation infrastructure should be designed to accommodate as many users and user types as possible. Typically, cyclists can be categorized into one of the following four groups:

Strong and Fearless cyclists will cycle on any roadway that bicycles are permitted, regardless of the speed and volume of traffic on the adjacent roadway and regardless of whether cycling-specific infrastructure exists.

Enthusied and Confident cyclists are those who are comfortable sharing the roadway with motor vehicles but prefer doing so either within their own designated area (i.e. with pavement markings and/or signage for the preferential or exclusive use of cyclists) or on low speed/low volume roadways.

Interested but Concerned riders typically represent approximately 60% of the cycling population, the bulk of the cycling community. They typically prefer to ride on low volume, low speed roads or multi-use pathways totally separated from motor vehicle traffic. They often ride less frequently but may become Enthusied and Confident with more experience, encouragement, education and better facilities.

Together, Enthusied and Confident riders and Interested but Concerned riders comprise the target cyclist groups for much of the infrastructure improvements proposed as part of the plan. The goal of improving cycling infrastructure is to provide more cycling opportunities for the Interested but Concerned cycling community so that they can gain the confidence and experience necessary to become Enthusied and Confident.

No Way - No How individuals represent approximately 30% of the population. They are not cyclists and either have no interest in becoming cyclists or are unable to ride. They are still important from the perspective of encouraging good driving behaviour and greater awareness of pedestrians and cyclists.

Table 1: Cyclist Behaviour and Percentage of Riders





Strong and Fearless	Enthused and Confident	Interested but Concerned	“No Way – No How”
			
1% of riders	7% of riders	60% of riders	32% of riders

Table 2: Types of Facilities for Cyclists







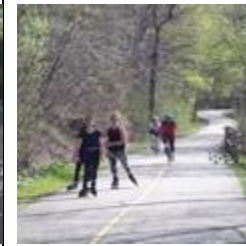




Shared Roadways			Fully Paved Shoulders	Bike Lanes	Multi-Use Pathways	
Unsigned Low Volume Roads	Signed	Pavement Markings			Within Road Right-Of Way	Separate Alignment
						
<p>Suitable for lower volume roads with lower operating speeds. As volumes of vehicles and/or cyclists increase, signage and roadway markings may be added.</p>			<p>Improves conditions for pedestrians and cyclists, while also improving motor vehicle safety and reducing shoulder maintenance costs.</p>	<p>Dedicated facility often limited to urban settlement areas. Provides separation between cyclists and motor vehicles.</p>	<p>Greatest separation between motor vehicles and active modes. Offers greatest opportunity to attract “Interested but Concerned” category of cyclist.</p>	

Table 3: Types of Facilities for Pedestrians

Sidewalk	Fully Paved Shoulder	Multi-Use Pathway	Road Crossings
			
<p>Fully separate facility limited to pedestrians only. Typically limited to urban settlement areas.</p>	<p>Serves needs of pedestrians and cyclists, while also improving vehicle safety. Offers improved pedestrian facility for rural areas.</p>	<p>Greatest separation between motor vehicles and active modes. Requires speed limits for cyclists to protect pedestrians.</p>	<p>Crossings remove barriers created by high volume/high speed roadways. Ranges from pavement markings and signage to signalization.</p>

Other Facilities

Facilities that improve access to or enhance Active Transportation opportunities without adding Active Transportation linkages to the network are included under “Other Facilities”. Examples include:

- Vehicle parking at multi-use pathway access locations.
- Canoe and kayak river accesses.

12.0 COMPLETE STREETS

Complete Streets are multi-modal streets designed and operated to provide safe access for all road users, including pedestrians, cyclists and motorists of all ages and abilities. This approach places a greater emphasis on pedestrians, cyclists, accessibility and streetscape by providing separate space within the right-of-way for these modes of travel. It assists in changing the traditional approach that for many years has focused on the provision of roads to accommodate motor vehicles.

A “Complete Streets” approach to infrastructure projects within the Town would:

- Provide safe, accessible streets for people of all ages and abilities;
- Give people a range of transportation choices;
- Promote healthy and livable communities;
- Contribute to environmental sustainability;
- Support economic prosperity; and
- Create vibrant and attractive places.



Photo 4: Multi-use Path Users in Renfrew

13.0 POLICIES

Policies are principles and/or guidelines designed to be used by the Town's decision makers to both improve existing roadway conditions and to influence greater adoption of active transportation.

Proposed policies have been divided into the following categories:

- 1) Planning
- 2) Road Design
- 3) Active Transportation
- 4) Parking
- 5) Safety and Accessibility
- 6) Working from Home

1) The following **Planning Policies** are recommended to improve existing roadway conditions:

- A policy to improve the aesthetics of road rights-of-way by implementing building setbacks from the road and burying fibre and hydro lines. This also achieves greater resiliency for utilities and overland flow routes during major storm events.
- A Traffic Calming policy to support the Town in addressing traffic calming requests.
- The establishment of a common name for Veteran's Memorial Boulevard, Raglan Street, and O'Brien Road.
- The creation of truck route by-law.
- Road Design Standard for new roads and road widening.
- The Town should also consider incorporating roundabouts as an alternative to improve safety and traffic operations.

2) This plan has created a **Road Design Standard** for new roads and road widening projects in the Town. It has also created a Road Classification, included in **Appendix F**. Lane widths will meet the Transportation Association of Canada (TAC) recommended infrastructure standards which include:

- A minimum width of 1.5 m or a desired width of 1.8 m for all sidewalks.
- A minimum width of 1.0 m or a desired width of 3.0 m for all boulevards.
- A minimum width of 3.0 m or a desired width of 4.0 m for all MUP.
- A requirement that Collector roads have at least one sidewalk.
- A requirement that Arterial roads have two sidewalks, or one sidewalk and one MUP.
- Brownfield construction shall meet the minimum requirements of the road widening policies, described in **Appendix C**.
- Ongoing construction projects shall meet where possible the minimum the road width policies.
- Minimum road widths for local, collector and arterial roads:
 - Local Roads: 20 m
 - Collector Roads: 26 m
 - Arterial Roads: 30 m

3) Adopting **Active Transportation** supportive strategies and initiatives as part of the planning process is recognized as an opportunity to improve economic prosperity through the promotion of tourism,

economic development and healthy lifestyles for residents and visitors. Where feasible and appropriate, best practices to support Active Transportation should include:

- The use of Pedestrian Crossovers and School Crossings.
- Traffic Signal timings should accommodate pedestrian walking speeds.
- Provisions for Cyclists to safely share the road with motorists.
- Improving wayfinding and signage.
- Improving education and information distribution.
- A policy that provides warrants for the provision of paved shoulders on medium to high volume roads to accommodate active transportation, improve safety, and reduce shoulder maintenance costs.

4) A lack of **parking spaces** was a main concern of residents that attended POH No. 1/Community Café. To address this concern, this plan recommends the following Parking Policies:

- The use of and signage to parking stalls behind store buildings for employee parking.
- New Municipal parking lots and improved signage to existing lots.

An additional parking policy is the provision of Electric Charging Stations within existing parking lots, to encourage electric vehicle use.

5) Promoting **safety** and **accessibility** for all modes of travel is the desired outcome of this plan. Adopting a Complete Streets approach for all corridor improvements within the Town is recommended to achieve this objective. A Complete Streets approach also meets the objective of Active Transportation initiatives and promotes healthy lifestyles.

6) The COVID-19 pandemic reshaped work trends, encouraging people to **work from home**. The MTP recommends improvement of high-speed internet within the Town, to encourage people to work from home.

The long list of potential policies, and identification of policies carried forward in the MTP is in **Appendix C**.

14.0 PROGRAMS

Programs are further plans of action that may require input and support from external stakeholders such as the County and MTO, and/or partnerships with other organizations.

The Town should consider creating programs for the following initiatives to improve safety, increase active transportation, and support a vibrant economy:

- Provide a private commuter bus service to the Ottawa region to better service the mobility needs of the community.
- Promote a ridesharing program to improve accessibility, lower carbon emissions, and achieve travel demand management.
- Provide electric car charging stations near local restaurants and businesses.
- Create a website to educate the public on roundabouts.
- Make it easier for tourists to find local businesses and attractions by improving wayfinding and signage in the Town.
- Advertise businesses along Algonquin Trail and Millennium Trail.
- Provide maintenance of existing facilities and prioritize improvements to crossings.

The long list of potential programs, and identification of programs carried forward in the MTP is in **Appendix C**.

15.0 PROJECTS

The MTP developed a conceptual network that has identified road, bridge, and Active Transportation projects. This list of facilities was expanded through Community Café/ POH events, and discussions with agencies and stakeholders. A long list of projects included MUP's, roadway improvements, pedestrian crossings, new or improved trail networks, and the provision of additional parking lots and/or spaces.

The long list of projects was evaluated to assist in establishing priorities for the Town.

Numerous roads within the Town require maintenance or improvements. The main concern of residents during the POH/Community Café was the need to address traffic congestion and improve connectivity of the existing road network in the Town.

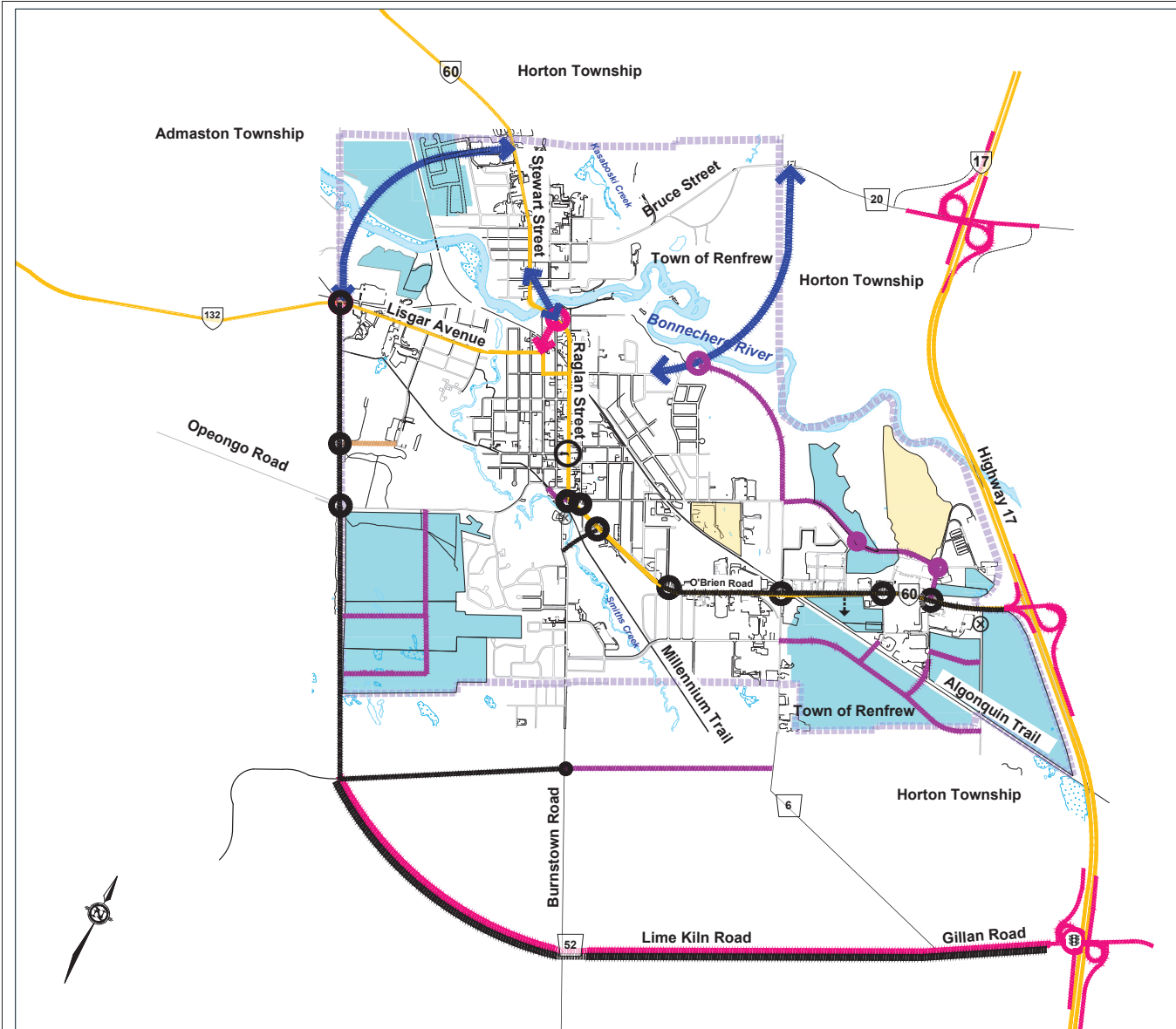
There are several projects recommended for future EA Studies, including:

- Raglan Street South/Veteran's Memorial Boulevard/Opeongo Road/Hall Avenue Intersection improvements.
- A new West Bonnechere River crossing.
- Completion of an EA for the replacement of the Raglan Street Bridge at a new alignment including reconstruction of Raglan Street (to accommodate an intersection in close proximity to the bridge).
- Completion of EA to close Whitton Road at O'Brien Road and East Development Lands connectivity (EA Study was commenced in March 2024).

A complete list of short-listed projects identified in the MTP are shown in **Figure 9**. The projects were prioritized as short, medium or long term. Short-term (within 10 years) are shown in **Figure 10**. Medium-term projects (10-20 years) are shown in **Figure 11**. Long-term projects (beyond 20 years) are shown in **Figure 12**. **Appendix E** includes drawings for the short listed projects and **Appendix F** includes the Schedules of Projects.

The Implementation Strategy for road network projects that were carried forward are in **Table 4** and for active transportation projects that were carried forward are in **Table 5**. For a long list of potential projects, see **Appendix D**.















Figure 9



Renfrew

Master Transportation Plan

Legend

-  New River Crossing Alternative
-  New Arterial Road Improvements
-  New Arterial Road Roundabout
-  New Collector Road Alternative
-  New Collector Road Roundabout
-  New Highway Improvement
-  Signals and left-turn lanes
-  New Highway/Arterial Roundabout
-  Road Closure
-  New Driveway/ Roadway Alternative
-  Left Turn
-  Roadway Extension
-  Development Areas
Source: Town of Renfrew Official Plan January 2018 Schedule 'A'.
-  Brownfield Areas (previously developed land that is currently vacant)

Overall Roadway Projects Under Study

NTS
September 2024

Figure 10

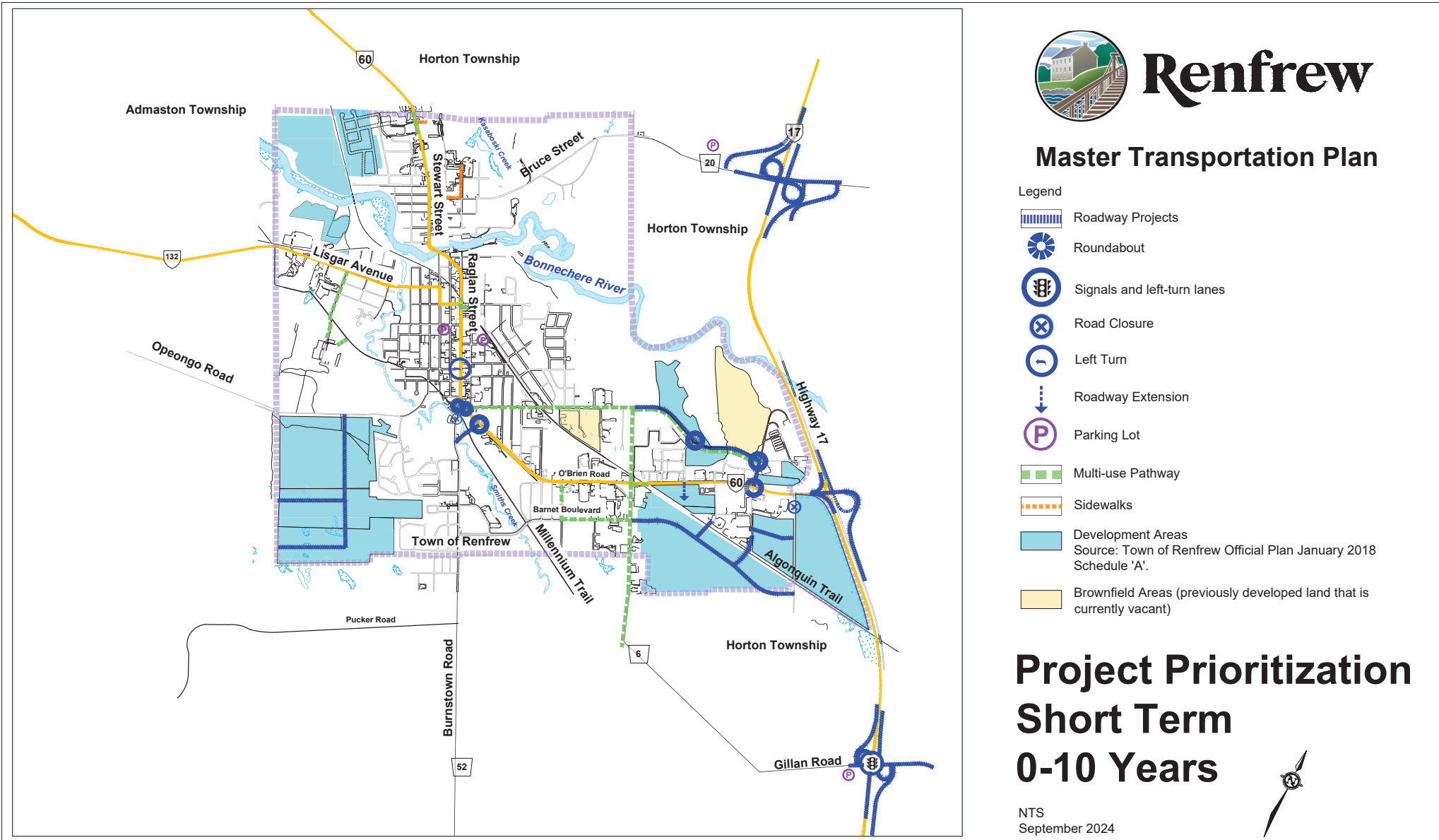


Figure 11

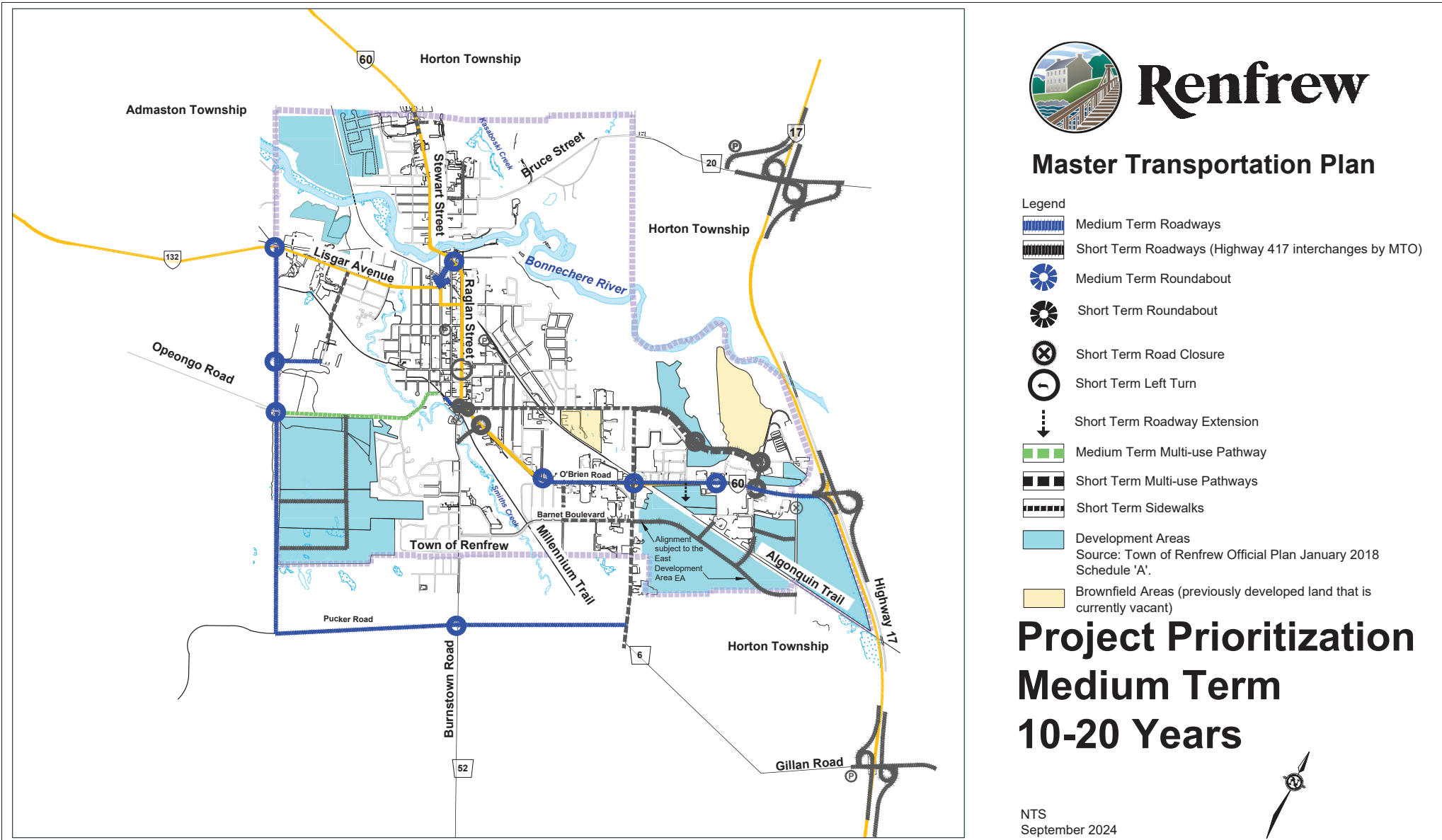
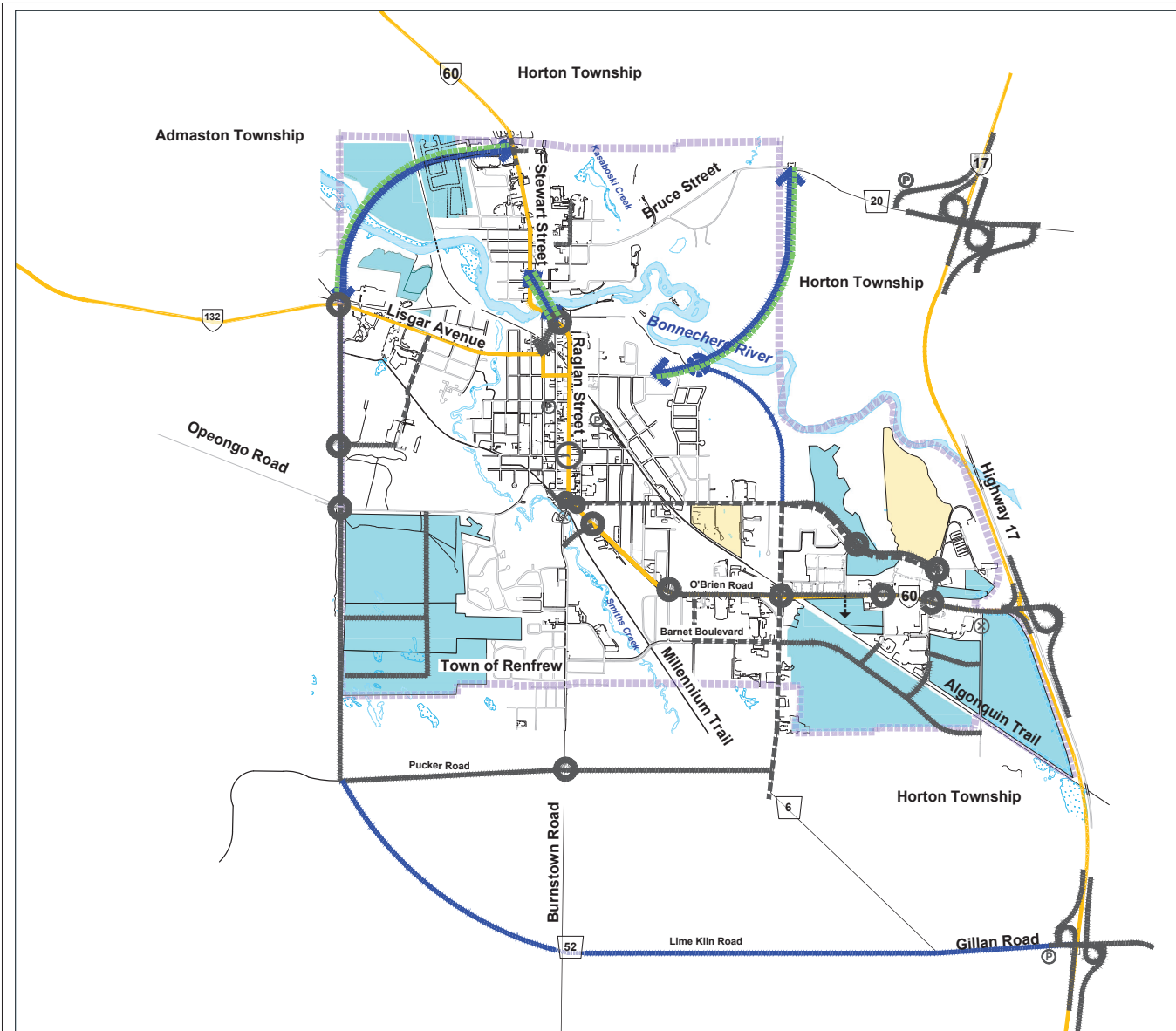














Figure 12



Renfrew

Master Transportation Plan

Legend

-  Long Term Road Projects
-  Medium and Short Term Roadway Projects
-  Long Term Roundabout
-  Medium and Short Term Roundabout
-  Short Term Road Closure
-  Short Term Left Turn
-  Short Term Roadway Extension
-  Long Term Multi-use Pathways
-  Multi-use Pathways
-  Sidewalks
-  Development Areas
Source: Town of Renfrew Official Plan January 2018 Schedule 'A'.
-  Brownfield Areas (previously developed land that is currently vacant)

**Project Prioritization
Long Term
20+ Years**

NTS
September 2024



15.1. Active Transportation

Improving the existing active transportation facilities in the Town is imperative to promote healthy lifestyles and environmental sustainability. Consideration must also be given to the safety of pedestrians and cyclists that share the roads with motorists.

The existing active transportation networks in the Town require significant improvements, protection and expansion of both on-street and off-street facilities, including sidewalks, crosswalks, pedestrian crossings, MUP's, and parking at existing trailheads (see **Figure 13**).

Several MUP's projects have been proposed to improve the active transportation network in the Town for cyclists and pedestrians, including the following:

- Barnet Boulevard to Gillan Road MUP link.
- New MUP on Gillan Road and installing signage to use Gillan Road as an alternate route to Highway 17.
- Northerly extension of the existing MUP on Stewart Street.
- A MUP on Opeongo Road.
- A MUP on Hall Avenue.

An investigation of the connectivity of the sidewalk network and the provision of sidewalks on Bruce Street and Health Village Lane has been recommended as a component of this MTP.

Linkage of Algonquin Trail to Ma-te-way Park via the Millennium Trail is also recommended to improve the connectivity of the existing trail network in the Town (see **Photo 5**).

For a full list of comments and Active Transportation projects carried forward, refer to **Appendix D**.



Photo 5: Algonquin Trail to Ma-te-way Park via the Millennium Trail





Figure 13



Renfrew

Master Transportation Plan

Legend

-  Existing Multi Use Pathway (MUP)/Abandoned Railway Trails
-  New MUP/Active Transportation
-  Proposed Parking
-  New Sidewalks

Active Transportation and Parking

NTS
September 2024



15.2. Bridges

The current road network of the Town encompasses two (2) vehicular bridges and one (1) pedestrian bridge (see **Photo 6**).

Through public consultation and preliminary research, several additional bridge crossings over the Bonnechere River have been proposed, including:

- A new Bonnechere River crossing in the west including a new alignment adjacent to the Town boundary from Highway 132 to the northern development area (long term property protection).
- A new central Bonnechere River crossing including a new alignment from Bruce Street westerly to Highway 132 (long term property protection).
- Replacement of the existing Raglan Street Bridge (see **Photo 7**) at a new elevation including the reconstruction of Raglan Street to accommodate an intersection in proximity to the bridge. (Replacement as a 4-lane structure when the existing bridge reaches the end of its service life in 20-30 years).
- A new crossing over Bonnechere River in the east at the extension of Gillan Road and Munroe Avenue East (long term property protection).

For a full list of comments and potential bridge projects carried forward, refer to **Appendix D**.



Photo 6: Existing Pedestrian Bridge across Bonnechere River



Photo 7: Existing Raglan Street Bridge crossing Bonnechere River

16.0 IMPLEMENTATION STRATEGY

The Implementation Strategy is the prioritization of the short list of projects. The long list of projects is included in **Appendix D**.

Table 4: Implementation Strategy for Recommended Road Network Projects

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority	Jurisdiction	Parametric Cost (2024 Dollar)
7	Raglan/Hall/Veterans Memorial Intersection Improvements			Future EA Study to define intersection improvements. An integrated EA with the Town and County. An EA outcome is a property protection plan to be included in Official Plan Update. See Opeongo Road realignment ID No. 40.	C	EA: Short Term Implementation: Long Term	Town of Renfrew and County of Renfrew	\$175,000 (EA)
8	New West Bonnechere River crossing	Highway 132	Northern development/ Highway 60	This project should be planned as an integrated EA with the development areas to establish the collector road alignment within the plans of subdivision.	C	Long Term	Town of Renfrew	\$175,000 (EA)
11	Replacement of the Raglan Street Bridge	Stewart Street	Argyle Street North	Completion of an EA for the replacement of the bridge as a 4-lane crossing at a new alignment including reconstruction of Raglan Street (to accommodate an intersection in close proximity to the bridge). Future alignment of the Raglan Street bridge should be planned to	C (including road realignment)	EA: Medium Term Implementation: Long Term	Town of Renfrew and MTO	\$175,000 (EA)

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority	Jurisdiction	Parametric Cost (2024 Dollar)
				be offset from the existing bridge and at a higher elevation. This will accommodate staging of the new bridge and a connection to Highway 132.				
14	New East Bonnechere River crossing	Gillan Road	Highway 20	Includes both the Munroe Avenue East and Gillan Road extension as potential crossing locations. ID No. 14 and 15 identify the property protection for long term improvements.	C	Long Term	Town of Renfrew	\$175,000 (EA)
15	Gillan Road/Highway 17 intersection signalization			Signalized intersection prior to MTO construction of the interchange to improve safety.	Exempt	Short Term	MTO	N/A
16	Realign Highway 132 to connect to Highway 60	Lisgar Avenue	Raglan Street North	Connection in the vicinity to Lochiel Street, in consideration with ID No. 11 with realignment to Raglan Street.	B/C	Short Term	MTO	N/A
18	Construct Highway 17/ Gillan Road Interchange			Freeway connection to Highway 17.	Completed by MTO	Medium Term	MTO	N/A
19	Construct Highway 17/ O'Brien Road Interchange			Freeway connection to Highway 17.	Completed by MTO	Medium Term	MTO	N/A
20	Construct Highway 17/ Bruce Street Interchange			Freeway connection to Highway 17.	Completed by MTO	Medium Term	MTO	N/A

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority	Jurisdiction	Parametric Cost (2024 Dollar)
21	Realign Highway 132 to connect to Highway 17			Connection south through Admaston / Bromley and Horton Townships (same as ID 33)	B/C	Long Term	MTO	\$150,000 (EA)
23	Close Whitton Road at O'Brien Road and improve connections to East Development Lands	O'Brien Road	Gillan Road	See ID 36. Includes new road link from Innovation Drive to Whitton Road.	B	Short Term	Town of Renfrew and MTO	\$3 Million
24	Roundabout at O'Brien Road and Mask Road				Exempt/B (if property is required)	Medium Term	Town of Renfrew	\$2.3 Million
25	Roundabout at Wrangler Road/ Innovation Drive/ O'Brien Road				Exempt/B (if property is required)	Short Term	Town of Renfrew	\$2.3 Million
26	Extend Froats Street and create 4-way intersection at O'Brien Road				B	Short Term	Town of Renfrew	\$0.5 Million
27	Roundabout at O'Brien Road and Gillan Road				Exempt/B (if property is required)	Medium Term	Town of Renfrew	\$2.3 Million
28	Roundabout at O'Brien Road and Fortington Street				Exempt/B (if property is required)	Medium Term	Town of Renfrew	\$2.3 Million
29	Construct northbound left-turn lane on Raglan Street at Renfrew Avenue West			Includes removal of on-street parking stalls	Exempt	Short Term	Town of Renfrew	\$0.2 Million
30	O'Brien Road 4-lane arterial	Highway 17	Raglan Street South		C	Medium Term	Town of Renfrew	\$7.5 Million

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority	Jurisdiction	Parametric Cost (2024 Dollar)
31	New Boundary Road connection	Opeongo Road	Highway 132	Improve access to Ma-te-way Park with connection to new Boundary Road.	C	Medium Term	County of Renfrew and Admaston / Bromley Township	\$3 Million
32	New Boundary Road connection	Opeongo Road	Pucker Street/ Raglan Street	This provides a southern/western Boundary Road of Renfrew connecting Burnstown Road to Highway 132	C	Medium Term	Horton Township	\$4 Million
33	Redesignate Boundary Road/ Lime Kiln Road connection to Highway 17 as Highway 132 (MTO)			(same as ID 21)	B/C	Long Term	MTO	
34	Hall Avenue extension	Gibbon's Road	Hall Avenue	The MCEA Study was completed in 2014. The construction of the extension is recommended in the short term.	Complete	Short Term	Town of Renfrew	\$5 Million
36	Extension of Innovation Drive	Innovation Road	Barnet Boulevard	Being carried forward as a separate Schedule C Class EA (same as ID 23) Extension or Whitton Road closure as part of East Development Lands Recommended Plan and Secondary Plan.	B	Medium Term (Construction)	Town of Renfrew	\$10 Million
38	Mask Road and Innovation Drive extensions	Road terminus	New Collector Road	Preliminary preference for the closure of Whitton Road and extension of Mask Road and	B	Medium Term	Town of Renfrew	\$5 Million

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority	Jurisdiction	Parametric Cost (2024 Dollar)
				Innovation Drive to the new collector road, as part of the East Development Lands, subject to Municipal Class EA and Secondary Plan.				
40	Realignment of Opeongo Road	Opeongo Road	Raglan Street	Connection to improved Raglan Street intersection. The timing of this project must be combined with ID 7.	C	Medium Term	Town of Renfrew	\$3 Million
42	Extend Pucker Street	Burnstown Road	Gillan Road, County Road 6	This provides a southern/western Boundary Road of Renfrew connecting Gillan Road to Highway 132.	C	Medium Term	Town of Renfrew and Horton Township	\$7.5 Million
44	New collector road	Opeongo Road	Southerly	To support the southwest development area.	B/C	Short Term	Town of Renfrew	\$3 Million
64	O'Brien Road to Gillan Road			Re-route some traffic through Gillan Road to reduce congestion on O'Brien Road. Improvements to support connection to MTO interchange at Gillan Road.	Exempt	Medium Term	County of Renfrew	N/A
66	Renfrew Victoria Hospital			Streetlighting	Exempt		Town of Renfrew	\$200,000

Table 5: Implementation Strategy for Recommended Active Transportation Projects

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority (years)	Jurisdiction	Cost Range
46	Hall Avenue			Construct multi-use paths	Exempt	Short Term	Town of Renfrew	\$150,000
47	Opeongo Road			Construct multi-use paths	Exempt	Medium Term	Town of Renfrew	\$150,000
48		Link trail to Ma-te-way Park		Provide connections between Algonquin Trail and Millennium Trail to access Ma-te-way Park (1. Ma-te-way Park Drive and 2. Hall Avenue)	Exempt	Short Term	Town of Renfrew	\$150,000
49	Extend MUP along Barnet Boulevard to Gillan Road			Provide MUP link from 8th Street to Gillan Road. See Barnet Extension ID No. 27	Exempt	Short Term	Town of Renfrew	\$150,000
50	Gillan Road	O'Brien Road	Millenium Trail	Provide new MUP	Exempt	Short Term	Town of Renfrew	\$150,000
51	Stewart Street	Mason Avenue	Northerly	Extension of MUP	Exempt	Short Term	Town of Renfrew	\$150,000
52	Provide wider sidewalks and improve sidewalk connections in the area surrounding Victoria Hospital and retirement residences			Improve sidewalk connectivity in the area of Health Village Lane and hospital	Exempt	Short Term	Town of Renfrew	\$150,000
54	Children's Aid Society - Vacant Lot			Convert to additional parking space	Exempt	Short Term	Town of Renfrew	\$400,000

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority (years)	Jurisdiction	Cost Range
55	Park and Ride			Provide better signage to the Mask Road Park and Ride (i.e. signage on O'Brien Road) and/or expansion Construct new Park and Ride lots at the new MTO interchanges on Highway 17	Exempt	Short Term	Town of Renfrew	\$50,000
56	New Trailhead Parking			New trailhead for the Algonquin Trail at Railway Avenue.	Exempt	Short Term	Town of Renfrew	\$150,000
57	New Arterial Road			Coordination of an alignment through the northwest development lands that can facilitate the long-term arterial road for a west Bonnechere River crossing.	C	Long Term	Town of Renfrew	N/A
58	New link on Eighth Street	O'Brien Road	Barnet Boulevard	New active transportation link (sidewalk and/or multi-use path).	Exempt	Short Term	Town of Renfrew	\$200,000
59	Realign Algonquin Trail			Realign the trail from a skew crossing to cross at the signalized intersection at Gillan Road/ O'Brien Road.	Exempt	Short Term	Town of Renfrew	\$75,000
60	Realign Algonquin Trail			Realign the trail from a skew crossing to cross at the signalized intersection at Munroe Avenue East/Raglan Street North to improve pedestrian/cyclist safety.	Exempt	Short Term	Town of Renfrew	\$75,000
61	Canoe/kayak launch			Create a boat launch in the Bonnechere River.	Exempt	Short Term	Town of Renfrew	\$75,000
62	Increase downtown parking spaces			Provide more parking spaces with the construction of new municipal parking lot(s).	Exempt	Short Term	Town of Renfrew	\$400,000

ID #	Road Name	From	To	Project Description	Class EA Schedule	Priority (years)	Jurisdiction	Cost Range
63	Parking signage			Provide directional parking signage for shoppers/visitors to utilized available parking off the main street.	Exempt	Short Term	Town of Renfrew	\$50,000
68	Create a parking lot(s) along Algonquin Trail and Millennium Trail for recreational use			New parking lots on available property	Exempt	Short Term	Town of Renfrew	\$200,000
70	Ma-te-way Park Drive	Highway 132	Ma-te-way Park	New multi-use path/sidewalk	Exempt	Short Term	Town of Renfrew	\$100,000

17.0 REFERENCES

- 1) Ontario Traffic Manual Book 15 - Pedestrian Crossing Treatments, June 2016.
- 2) Ontario Traffic Manual Book 18 - Cycling Facilities, October, 2021.
- 3) Bikeways Design Manual, Ontario Ministry of Transportation, March 2014.
- 4) Geometric Design Guide for Canadian Roads, Transportation Association of Canada (TAC), June 2017
- 5) MTO Design Supplement for TAC Geometric Design Guide for Canadian Roads (April 2020).
- 6) Guide for the Development of Bicycle Facilities, AASHTO, 2012.