



6

IMPLEMENTATION

This report describes the long term vision for active transportation in Yarmouth, and outlines an achievable and feasible phasing plan. The proposed plan is consistent with the objectives outlined by previous studies and plans for the area, as well as the strategic direction provided by the Steering Committee.

6.1 IMPLEMENTATION PROCESS

The Yarmouth Active Transportation Plan is intended to be an evolving plan. Implementation will occur through a suggested four phase process that allows for checks and balances of the program elements, as municipal and stakeholder priorities change, and opportunities become available.

Phase One: Preliminary Review

The first step towards implementation of the AT plan is adoption and ratification of the plan by Yarmouth Town Council and Yarmouth Municipal Council. The plan should be adopted and endorsed in principle, which will set the underlying foundation for any subsequent work related to active transportation. This will still permit both Councils to implement the various projects, segments, and recommendations on an individual basis.

Once the plan has been adopted in principle, it will be important to determine the administrative owner. Implementation will be facilitated if one Town or one Municipal department has clear ownership and responsibility to move the plan forward. Ownership may rest with the Town Engineer, or Municipal Recreation Director, or be directed towards another department.

Upon a determination of who will champion the plan towards implementation, a review of planned / anticipated capital projects should be completed. This should occur concurrently with a review of the priorities outlined in the AT plan. A preliminary review of the year's planned AT facilities should be completed, taking into consideration any synergistic opportunities to piggyback with other planned capital maintenance or operational road improvement projects. Once this review is complete, adequate information should exist to make the determination to move forward with a project (or projects), or hold off until the follow budgetary year.

Phase Two: Feasibility

Once the decision to move forward has been made, it is necessary to determine what type of AT facility is under consideration. A feasibility assessment should be conducted, looking at the following:

- undertake an evaluation of the route, based on the criteria outlined in the priority matrix;
- collect necessary site information, such as a topographic and legal survey, environmental assessment, or other required or informative studies;
- examine costs and benefits of proposed route linkage, looking at capital and maintenance costs, efficiencies with other capital projects, and overall benefits;
- Coordinate construction with other projects, if that option is available;
- Make a recommendation regarding the feasibility of the route linkage.

The feasibility assessment generally would occur concurrently with any Class EAs, or schematic or functional design processes for road works or open space design. The feasibility assessment provides the opportunity to develop route linkages concurrently with capital projects, although this is not the only trigger of route linkage feasibility.

Phase Three: Detailed Design

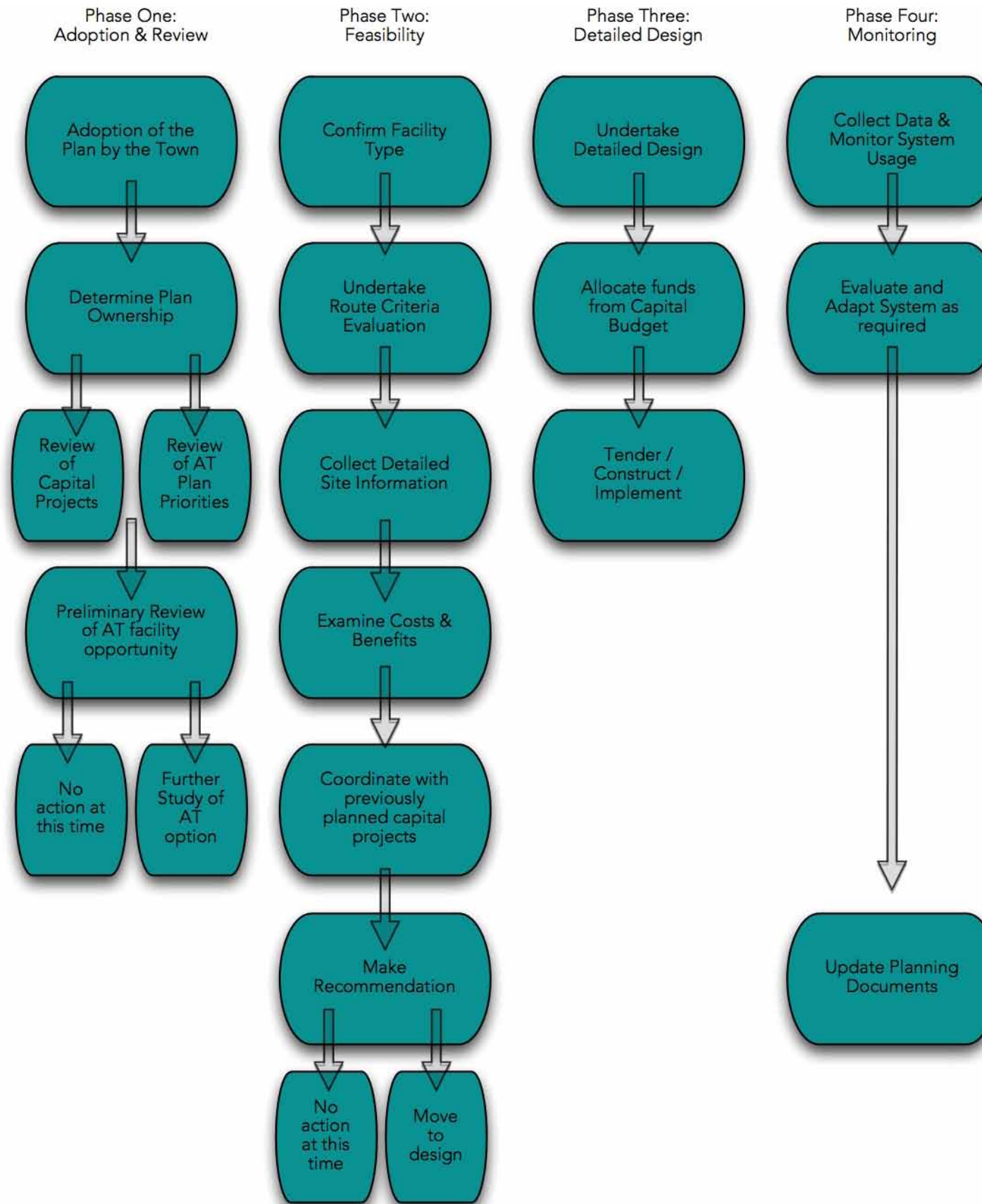
Once feasibility of the route linkage has been confirmed, detailed design can proceed. Detailed design may occur with or without coordination with ongoing capital improvement projects. Design should follow the recommended facility typologies and standard Municipal and Provincial design guidelines. Once detailed design has commenced, budget should be set aside in the applicable Town or Municipal budget for implementation.

It is possible that once detailed design is completed, the project will be unable to move towards implementation, for a variety of reasons. If this occurs, the route linkage should return to Phase Two, feasibility assessment, to determine the reason for the delay (i.e. design flaw, missing information, priority change, etc).

Phase Four: Monitoring

Once AT facilities have been implemented, their design and use should be monitored. Monitoring will determine if the facility functions as designed. As necessary, plan documents, details, and guidelines should be updated to reflect the implemented case use of the system. As the plan is revised and updated, the necessary planning and policy documentation should be updated as well.

6.1 Implementation Process



6.2 PLAN PRIORITIZATION

This report describes both a long-term 20-year vision and achievable short-term 10-year plan for Active Transportation in Yarmouth. The plans and proposals are consistent with the objectives described in both the public consultation component of this project, and many previous studies and reports.

Initiatives with a high profile and ease of implementation should be given the highest priority, especially where cost is not prohibitive. Larger and more complex projects will require time and further study to work out all the details required for implementation.

Setting priorities for implementation should be based on the following criteria:

- Immediate economic impact;
- Best probable funding opportunity;
- Timeline for possible environmental, infrastructure, and land acquisition issues;
- Potential for greatest positive impact;
- Ability to link to other open spaces and sites;
- Status of land ownership or construction readiness;
- Opportunity for partnerships with the private sector;
- Co-ordination with other on-going municipal projects;
- Logical design and construction sequence.

It is recommended that the Town & Municipality adopt a formal prioritization strategy, to rank proposed and planned projects. This ranking would then be taken into consideration along with the other factors outlined in the implementation process, in order to aid in the decision making process. A sample matrix is included in figure 6.2.

The matrix looks at a sidewalk, trails, and bike routes separately, and assigns points based on specific criteria. The higher the number of points, the more significant or important the factor. For example, a portion of sidewalk under consideration that is within 500m of a school would be highly ranked. The criteria and scoring should be refined by the Town and Municipality, to reflect specific community objectives. This approach will provide a more quantitative method to develop priority segments or facilities for implementation.



Sidewalk			Trail			Bike Route					
Criteria	Within 500m	Within 1000m	Total Points	Criteria	Within 500m	Within 1000m	Total Points	Criteria	Within 1000m	Within 2000m	Total Points
Elementary or Middle School	6	5		Elementary or Middle School	6	5		Elementary or Middle School	6	5	
High School	4	3		High School	4	3		High School	4	3	
Seniors Centre	4	3		Seniors Centre	4	3		Seniors Centre	4	3	
Daycare Facility	3	2									
Park or Recreation Centre	4	3		Park or Recreation Centre	4	3		Park or Recreation Centre	4	3	
Tourism Destination	3	3		Tourism Destination	3	3		Tourism Destination	3	3	
Commercial Area	3	2		Commercial Area	3	2		Commercial Area	3	2	
Place of Worship	2	1		Place of Worship	2	1		Place of Worship	2	1	
High Speed Limit or High Traffic Volume	4			High Speed Limit or High Traffic Volume	4			High Speed Limit or High Traffic Volume	4		
High Density Residential	4			High Density Residential	4			High Density Residential	4		
Medium speed limit or medium traffic volume	3			Medium speed limit or medium traffic volume	3			Medium speed limit or medium traffic volume	3		
Mid-density residential street	3			Mid-density residential street	3			Mid-density residential street	3		
Low-density residential street	2			Low-density residential street	2			Low-density residential street	2		
Industrial business park	1			Industrial business park	1			Industrial business park	1		
Rural street	1			Rural street	1			Rural street	1		
Missing Connection in otherwise contiguous sidewalk	1			Missing Connection in otherwise contiguous trail	1			Missing Connection in otherwise contiguous trail	1		
Years section has been on the forecast	0.5 x # of Years										
Connection to Rail Trail	1			Connection to Rail Trail	1			Connection to Rail Trail	1		
Total				Total				Total			

6.2 Sample Priority Matrix

6.3 BUDGET ESTIMATES

The implementation strategy illustrates how the recommended public projects may be completed in three phases. Assuming that funding is available, the work indicated should be able to be completed within the 20-year vision. These estimates also assume program budgets will be adjusted accordingly for inflation and other unexpected cost increases. The following table (Table 6.3) summarizes the total cost of implementation, and a breakdown of how these costs may be distributed over three phases.

The total implementation budget for the 20-year Yarmouth Active Transportation Master Plan is approximately \$10.2 million dollars (2010 dollars). If the Town and project funding partners were able to contribute approximately \$525,000 (2010 dollars) in capital or in-kind to the projects identified each year, all works could be completed within 20 years.

Some of the capital required may already exist within annual budgets for maintenance and renewal of the streets and other related infrastructure. We have included a 20% contingency to allow some flexibility during detailed design. We have also added 15% for design and project management costs; however, these will vary from 8% to 18% depending on the size, nature and the level of project management required. Exact costs will depend upon detailed designs and bidding climate prevailing at the time of implementation. All projects require detailed design to facilitate quality implementation.

Materials and quantities were derived from measurements taken from the georeferenced base mapping. This level of accuracy is sufficient for general planning; however, more accurate estimates will be required during the detailed design and construction stages before going to tender with proposed work. Actual costs may be plus or minus 20%. All quotes reflect December 2009 'installed' prices, not including tax. With recent ballooning petroleum values, prices could increase rapidly in line.

The budget estimate does not include costs for long-term easements, land purchases or private improvements. Miscellaneous items/costs are outlined in the various sub-area descriptions and these include allowances for grading, catch basin relocation and special features.

It is important to recognize that the drawings and designs in this document are conceptual only. A qualified design firm/team should be commissioned to prepare schematic and detailed design drawings and contract documents for each individual project. This additional cost has been accounted for in the cost spreadsheet.

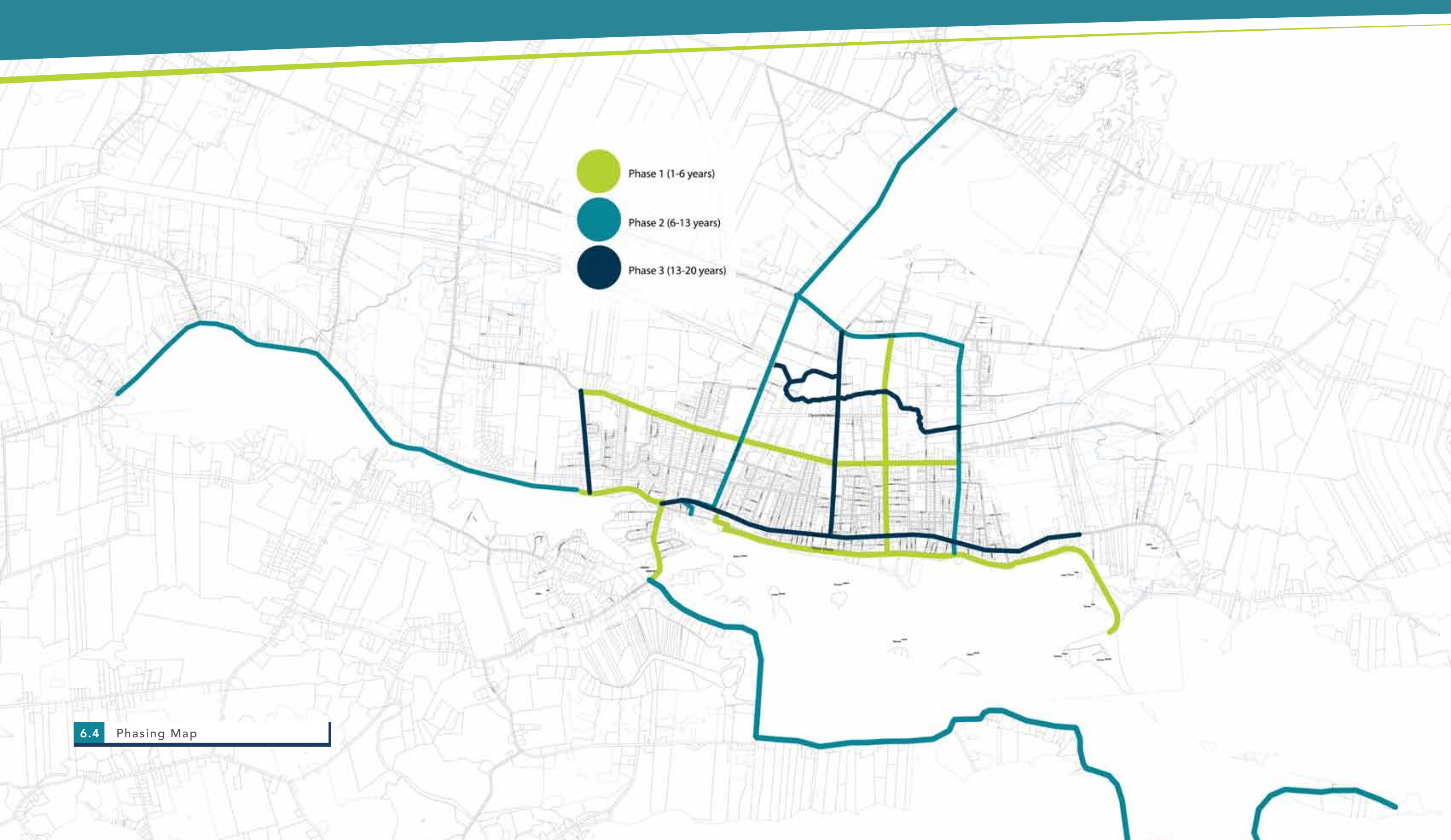
The implementation of the Yarmouth Active Transportation Master Plan will take a financial commitment on the part of the Town, and Municipality, with assistance from the County and the Province. A realistic strategy towards implementation is for proposed on-road facilities to be integrated into standard road capital and operational maintenance costs. In that manner, facilities can be constructed as part of regular Municipal and Provincial road construction and resurfacing.

The continuing increase in the popularity of trail-related recreation, in concert with a concern for community public health and the environment have led to an increase in the availability of funding for active transportation. It is recommended that the Town and Municipality seek additional funding outside of the tax base, in order to assist with the implementation of the AT master plan. Potential funding sources include:

- Federal / Provincial Gas Tax;
- Transport Canada's MOST (Moving on Sustainable Transportation) and
- ecoMobility (TDM) grant programs;
- Federation of Canadian Municipalities Green Municipal Fund;
- Conserve Nova Scotia
- Nova Scotia Health Promotion and Protection
- Federal / Provincial infrastructure stimulus funding;
- Human Resources Development Canada program that enables personnel positions to be made available to various groups and organizations. For example, the Ontario Trails Council has been able to hire two people under this program;
- Corporate Environmental Funds such as Shell and Mountain Equipment Co-op that tend to fund small, labour-intensive projects where materials or logistical support is required;
- Corporate donations may consist of money or services in-kind, and have been contributed by a number of large and small corporations over the years;
- Service Clubs such as the Lions, Rotary and Optimists have assisted with a number of high visibility projects at the community level; and
- Private citizen donations/bequeaths.

Estimate of Probable Costs									
	Measure	Units	Unit Cost	Phase One (km)	Phase One Cost	Phase Two (km)	Phase Two Cost	Phase Three (km)	Phase Three Cost
On Road Bike Lanes (both sides)									
Bike Lane Creation - Line Painting	8.1	km	\$10,000			4.2	\$42,000	3.9	\$39,000
Bike Lane Creation - Road retrofit	9.9	km	\$300,000	6.9	\$2,070,000	3.0	\$900,000		
Bike Lane Creation (tied into new road construction)	\$0	km	\$240,000						
Subtotal Bike Lanes					\$2,070,000		\$942,000		\$39,000
On Road Paved Shoulders (both sides)									
Paved Shoulder Surfacing - urban	0	km	\$300,000						
Paved Shoulder Surfacing - rural	11.8	km	\$400,000			11.8	\$4,720,000		
Paved Shoulders associated with road works - urban	0	km	\$160,000						
Paved Shoulders associated with road works - rural	0	km	\$225,000						
Subtotal Paved Shoulders					\$0		\$4,720,000		\$0
Signed Route									
Signed Route	16.3	km	\$4,000	16.3	\$65,200				
Subtotal Signed Route					\$65,200		\$0		\$0
Sidewalks									
1.5m wide concrete sidewalk	13.4	km	\$175,000	6.9		6.5	\$1,137,500		
3.0m wide concrete multi-use sidewalk	0	km	\$350,000						
1.5m wide asphalt sidewalk (with concrete curb)	0	km	\$125,000						
Subtotal Sidewalks					\$0		\$1,137,500		\$0
Off-road Multi-use Trail									
3.0m wide asphalt multi-use trail	3.7	km	\$190,000					3.7	\$703,000
3.0m wide crusher dust trail	0	km	\$125,000						
Crusher dust to asphalt trail conversion	5	km	\$115,000			5	\$575,000		
Subtotal Multi-use Trail					\$0		\$575,000		\$703,000
TOTAL	\$10,251,700				\$2,135,200		\$7,374,500		\$742,000

6.3 Cost Estimate



- Phase 1 (1-6 years)
- Phase 2 (6-13 years)
- Phase 3 (13-20 years)

6.4 Phasing Map

6.4 PHASING STRATEGY

This report describes the long term vision for Active Transportation in Yarmouth. Implementation of the various plan components will occur over a 20 year build out period, and successful realization of the strategy is integrally linked to a comprehensive and realistic phasing program. A successful approach will address any challenges that may arise and will implement the various elements of the plan in logical and cost-efficient manner.

Forecasting a year-by-year phasing strategy is difficult without a strong sense of annual budgets. Priorities set by the Steering Committee can be influenced by the opportunities that arise from unforeseen funding sources, new developments and private sector initiatives.

Phasing Timeline

- Phase One: 1 - 5 Years.
- Phase Two: 6 - 13 Years
- Phase Three: 13 + Years

The adjacent phasing plan (Figure 6.3.1) outlines the completion of the primary routes over the three phase implementation period. Priorities have been generally set, based on ease of implementation, ongoing projects, safety concerns, and connectivity. The phasing plan should be refined by Town and Municipal staff, based on the implementation and prioritization process outlined in this plan.

Phase One: Recommended Projects

Phase one projects should be the 'low hanging fruit'; the highly visible and highly requested projects with relatively easy implementation. Starting with visible projects will help to instill confidence in the public that the plan is moving forward, and will build excitement and momentum for implementation. The realization of a highly visible project would also provide the Town and Municipality with a marketing tool to help raise external funding for subsequent projects.

KEY PROJECTS SUGGESTED FOR PHASE ONE:

- The designation of the Hartlin Trail as a multi-use trail to facilitate use by cyclists.
- Pleasant Street - the addition of share the route signage, bike lanes, and contiguous sidewalk from Prospect Street to Argyle Street.
- Forest Street - the addition of share the route signage, bike lanes, and contiguous sidewalk from Haley Road to Water Street. This connection becomes increasingly important once the new High School is in operation.
- Vancouver Street - the addition of contiguous sidewalk, and painted bike lanes (share the road signage as an interim step).
- Main Street (the Evangeline Trail) along Lake Milo, to Prospect Street. The addition of paved shoulders or bike lanes, and contiguous sidewalk.
- Starrs Road - airport stretch. The addition of share the road signage.
- Cape Forchu - the addition of share the road signage.
- Evangeline Trail - the addition of share the road signage.

Phase Two: Recommended Projects

Phase Two projects begin to really move the entire project vision forward, from individual facilities to a contiguous active transportation network.

KEY PROJECTS FOR PHASE TWO:

- Starrs Road - the addition of paved shoulders along the airport stretch.
- Starrs Road - painted bike lanes from Haley Road to Main Street. Contiguous sidewalk from Haley Road to Main Street.
- Haley Road - the addition of share the route signage, bike lanes (or paved shoulders) and contiguous sidewalk, from Starrs Road to Argyle Street.
- Argyle Street - the addition of share the route signage, bike lanes (or paved shoulders) and contiguous sidewalk, from Haley Road to Water Street.
- The upgrade of the Rail Trail within Town limits from stone dust to asphalt surfacing
- The construction of the Broad Brook Trail, with stone dust surfacing (option to postpone to Phase Three)

Phase Three: Recommended Projects

Phase Three projects will likely have been revisited or re prioritized, based on the ongoing review and monitoring of the implementation process. Projects left to phase three should be those with significant engineering or implementation challenges, high capital costs, or other impediments to development.

KEY PROJECTS FOR PHASE THREE:

- The construction (or upgrade) of the Broad Brook Trail. If construction is postponed until this phase, recommendation to install asphalt surfacing immediately.
- The addition of painted bike lanes along Main Street.
- Parade Street: the addition of share the route signage, bike lanes (or paved shoulders) and contiguous sidewalk, from Haley Road to Main Street.

Phasing Summary

This is a hypothetical phasing plan, based on the initial assessment of AT priorities. The Town and Municipality should conduct their own prioritization assessment, based on internally evaluated criteria, to determine a more refined phasing plan. The phasing plan will adapt to meet the changing needs of the community, and the ongoing development of active transportation as a key lifestyle attribute of the citizens of Yarmouth.

6.5 MEASURING SUCCESS

Embarking on a twenty year plan requires dedication and assurance that capital investment is actually having a positive impact on the travel patterns of residents and visitors. Collecting data to properly assess this impact will be critical for the Town & Municipality in evaluating the effectiveness of the AT Plan. Every two years the Town and Municipality should conduct traffic counts on the trails and review the projected phased targets against actual conditions. Every five years the AT Plan should be updated to reflect new realities in the community and global trends. The following chart, Table 6.4 - Benchmarking Indices provides a sample of the type of data that should be collected and assessed. Initially an assessment will be done to establish existing benchmarks.



6.6 NEXT STEPS

In order for Yarmouth to move forward towards implementation of this AT vision, there are a number of recommended steps to be taken:

- Town and Municipal Council must adopt the Final Report of the Yarmouth Active Transportation Master Plan.
- Final copies of the approved master plan should be issued to adjacent municipalities, and other key stakeholding & funding groups, such as the Provincial Government, the School Boards, etc,
- The Town and Municipality should consider, and if fiscally feasible, begin to implement projects based on the priorities identified by this plan.

The AT plan is meant to be a dynamic document that evolves through community consultation and technical assessment of environmental and budget realities. Priorities may change in tune with development and street infrastructure upgrading. For instance, the abandonment of railways or the exchange of property ownership may provide the impetus to expedite trail enhancement in those areas.

STEPS TOWARDS IMPLEMENTATION

- Steering Committee approval of the AT master plan
- Presentation of approved master plan to Town and Municipal Council.
- Encourage Council's adoption of the master plan.
- Append adopted master plan to the Municipal Plan as a background document and encourage Council to adopt policies that facilitate the AT Master Plan strategy with subdivision development.
- Research and apply for funding for trail development and programming in concert with other organizations in the community looking for trails funding.

A successful AT Plan for Yarmouth will require leadership and champions to make trails a priority for the community. The Town and Municipality must nurture the present relationship with private and not-for-profit organizations to ensure collaboration and a common vision. Non-public funding opportunities for trail development area an important component of the AT network to be explored. Staff at the Planning Commission will play a key role in the long term initiative to link trails and accumulate land for future trail connections. The AT Plan would be reviewed and given consideration during development review, municipal updates, and during capital budget preparations.

Measuring Success			
Infrastructure	Beginning Benchmark	Current Year	Long Term Goal
Capital Funding			
Maintenance & Programming Funding			
Paved Shoulder			
Wide Curb Lane			
Bike Lane			
Signed Route			
Urban Sidewalk			
Rural Sidewalk			
Stone Dust Multi – Use Trail			
Paved Multi-Use Trail			
ATV Trail			
Snowmobile Trail			
Cross Country Trails			
Mountain Bike Trails			
Bicycle Parking Spots			
Management			
% Children walking or cycling to school			
% residents walking or cycling to work			
% of reported pedestrian and bicycle collisions/ 1000 population			
Number of students participating in safety education programs			
Funding for Outreach			

6.5 Benchmarking Indices





A

APPENDIX A: DRAFT BYLAW



**TOWN OF YARMOUTH / MUNICIPALITY OF YARMOUTH
PROPOSED TRAIL BY-LAW NUMBER**

RESPECTING THE CONDUCT AND ACTIVITIES OF PEOPLE AND DOGS ON DESIGNATED MUNICIPAL TRAILS BE IT ENACTED by the Council of the Municipality as follows:

Short Title

This By-Law shall be known as By-Law No. XXX and may be cited as the “Trail By-Law”.

Interpretation

In this By-law,

1. **“Active Transportation”** is any form of self-propelled (no-motorized) transportation that relies on the use of human energy such as walking, cycling, inline skating and jogging;
2. **“Clerk”** means the Clerk of the Municipality or the person designated by the Clerk to administer this by-law;
3. **“Designated Motorized Vehicle Crossing Location”** means a designated section of Municipal Trail where All Terrain Vehicles (ATV) or other motorized modes can cross the Municipal Trail in accordance with the *Motor Vehicle Act* and the *Off-Highway Vehicle Act*;
4. **“Dog”** means any dog, male or female;
5. **“Formal Trail”** means an identifiable off-road trail on the Municipality’s Active Transportation Plan;
6. **“Motor Vehicle”** means a Vehicle propelled by any power other than muscular power but does not include a motorized wheelchair or other similar device;
7. **“Motorized Vehicle Link”** means a designated crossing of an Improved Trail that is subject to such limitations as are posted;
8. **“Municipal Public Park”** includes any municipal park, school grounds, public swimming areas, playgrounds or sports or athletic field, but does not include Provincial or Federal lands;
9. **“Municipality”** means Halifax Regional Municipality;
10. **“Off Leash Area”** is an area designated by signage as an area where dogs are permitted to be without a leash subject to such limitations as are posted;
11. **“Owner”** of a dog includes any person who possess, has the care of, has the control of or harbours a dog, where the person is a minor, includes the person responsible for the custody of the minor;
12. **“Runs At Large”** means a dog off the premises of its owner *and without a leash*; and furthermore a dog shall be deemed to be running at large where it is on any private property or premises without the permission of the owner;
13. **“Trail Control Officer”** means a police officer or a by-law enforcement officer appointed pursuant to the Police Act; and
14. **“Casual Trail”** means an identifiable path, track or public right of way on Municipality property intended for use by Active Transportation modes.

PART I – REGULATION OF ACTIVITIES ON IMPROVED TRAILS

DOGS

Unless otherwise permitted by this bylaw and By Law D-100, no person shall allow any dog under their control, or for which they are responsible, to be on Municipal Trails.

1. A person may have a dog on Municipal Trail so long as the dog is:
 - 1.1. leashed and in an area governed by signage permitting dogs; or
 - 1.2. in an Off Leash Area.

2. Notwithstanding this section, a person having a dog on Municipal Trails remains subject, at all times, to every provision contained in By Law D-100 respecting the registration and regulation of dogs.
3. While on Municipal Trails no person shall:
 - 3.1. kill, injure, trap, tease or disturb any animal, bird or other wildlife; or
 - 3.2. touch, damage, disturb or remove any nest or egg therein.

MOTOR VEHICLES

No person shall:

1. operate a motor vehicle on Municipal Trails except on a designated rural crossing location;
2. operate an Off-Highway Vehicle, as per the *Motor Vehicle Act* and the *Off-Highway Vehicle Act*, on Municipal Trails.
3. drive or leave a motor vehicle on Municipal Trails during the hours people are not permitted to enter or remain on Municipal Trails as set out in this bylaw;
4. service, maintain or, except in the event of an emergency, repair a motor vehicle on Municipal Trails;

FIRE PREVENTION

While on Municipal Trails no person shall:

1. start, maintain or permit to remain lit a fire except in a fireplace, fire-pit or other similar receptacle provided by the Municipality for this purpose;
2. leave a fire burning unattended; or
3. leave a fire without completely extinguishing any flame and ensuring the embers are cold.

PRESERVATION OF NATURAL AREAS

While on Municipal Trails no person shall:

1. enter into any undeveloped or natural area other than on a Trail;
2. remove any rock, gravel, sand or soil;
3. move, remove, cut or damage any tree, shrub, flower, other plant or deadfall; or
4. possess a chain saw or machete.

PROTECTION OF THE ENVIRONMENT

While on Municipal Trails no person shall:

1. attach any poster, notice, advertisement or other similar item to any property except in an area designated by the Municipality for this activity;
2. urinate or defecate except in a facility provided by the Municipality for this purpose;
3. leave garbage, litter or other refuse except in a receptacle provided by the Municipality for this purpose;
4. deposit grass clippings, dirt, rubble or other waste materials;
5. deposit chemicals or pesticides; or foul the water of any lake, pond or other similar body of water.

RESTRICTED AREAS

While on Municipal Trails no person shall:

1. enter any area to which access has been prohibited or regulated by signage or fencing or other barricade; or
2. move, remove or alter any signage or fencing or other barricade prohibiting or regulating access to any area.

MUNICIPAL TRAIL ACCESS

No person shall enter or be on Municipal Trails:

1. between the hours of 11 p.m. and 5 a.m.; or
2. at any time when a section of Municipal Trails is closed.

TRAIL USE

1. Every person using an Improved Trail or an Unimproved Trail shall:
 - 1.1. yield the right of way to slower moving people; and
 - 1.2. use reasonable care when overtaking another person.
2. No person shall use an Improved Trail or an Unimproved Trail in a manner prohibited or regulated by signage governing the trail or any portion of the trail.
3. No person shall use an Unimproved Trail when conditions are such that using the Unimproved Trail is reasonably likely to result in damage to the facility.

DANGEROUS ACTIVITIES

While on Municipal Trails no person shall:

1. act in a way, including throwing or propelling an object, that is reasonably likely to cause injury to another person, or damage to property;
2. possess any firearm, bow, arrow or hunting type knife; or
3. modify any land in a way that is reasonably likely to cause injury to another person or damage to property.

OTHER MUNICIPAL TRAIL USERS

While on Municipal Trails no person shall:

1. do anything that is reasonably likely to disturb the peace or enjoyment of other persons using the Municipal Trails; or
2. interfere with the exclusive use of any section of Municipal Trails granted to another person or group.

INTERFERENCE

No person shall interfere with a Trail Control Officer in the exercise of their powers and duties pursuant this bylaw and By-Law D-100.

PART II – PENALTIES

The penalties will be prescribed in By-Law D-100.





B

APPENDIX B: EDUCATIONAL MATERIALS



The Guide for the Development of Bicycle Facilities

www.aashto.org

“The Guide for the Development of Bicycle Facilities” outlines the growing need for facilities that cater to the increased use of bicycles as a means of transportation. The guide suggests a variety of improvements that could be made within a given community to better accommodate the growing number of cyclists. Some of these suggestions include: constructing paved shoulders, widening roads, and improving the quality of the paved surface and drainage. This guide also emphasises that construction and redesign are not the only ways to improve Bicycle transportation but education is also crucial in the development and use of Bicycle facilities.

Bicycling for Transportation and Health: The Role of Infrastructure

<http://www.palgrave-journals.com/jphp/journal/v30/nS1/abs/jphp200856a.html>

Jennifer Dill’s paper, “Bicycling for Transportation and Health: The Role of Infrastructure”, investigates the impact of infrastructure on the amount of bicycle use. Dill follows 166 cyclists using gps systems and records their type of use (recreation or utilitarian) and tracks the type of routes they frequented. Dill concluded that approximately 49% of the cyclists travel used facilities specific to bicycle use.

Child-and Youth Friendly Land-Use and Transport Planning Guidelines

cst.uwinnipeg.ca

“Child-and Youth Friendly Land-Use and Transport Planning Guidelines” establishes a set of guidelines focused on reducing the use of automobiles by children and youth as a primary use of transportation and reducing automotive traffic in areas frequented by children and youth. The document also outlines the issues that surround automobile use and our younger generation’s lack of physical activity.

Let’s Move

www.letsmove.gov

The “Let’s Move” campaign established by Michelle Obama is an example of a successful campaign to decrease childhood Obesity in North America and encourages people to increase their daily physical activity. The “Let’s Move” website suggests ways in which we can as an individual, as a family and as a community, live a healthier lifestyle.

Communities in Motion: Bringing Active Transportation to Life

www.sustainablecommunities.fcm.ca

“Communities in Motion: Bringing Active Transportation to Life” encourages municipalities to promote active transportation through; the development of committees to oversee planning endeavours and educating the public, the creation of resources to support active transportation, and effective planning for new active transport facilities.

Haliburton County Cycling Master Plan: Final Report

www.cyclehaliburton.ca

The “Haliburton County Cycling Master Plan: Final Report” is an example of the efforts planned by the Haliburton, Kawartha, Pine Ridge District in Ontario to support cycle use in their community. Recognizing the need for better cycling facilities, the community established a phased plan to complete the improvements required by cyclists.

Healthy Communities and the Built Environment: Multi-Sectoral Collaboratives

“Healthy Communities and the Built Environment: Multi-Sectoral Collaboratives” used a series of seven examples of collaboratives across Ontario that devised plans and conducted efforts to increase the use of active transportation in their communities. The report draws conclusions from the methods used by these communities and investigates the success or failure of the methods.

Teacher’s Guide to Physical Activity for Children

<http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/pag-gap/cy-ej/pdf/kids-teachguide-eng.pdf>

The “Teacher’s Guide to Physical Activity for Children” is a guide developed by the Public Health Agency of Canada to assist teacher’s in discussing the importance of physical activity with young students ages 6 to 9 years old. The guide provides a variety of methods that could be used to encourage and educate children about physical activity. The guide also includes methods used of teacher in the classroom to educate children about the importance of physical activity.

Making Tracks

<http://saferoutesns.ca/index.php/special/making-tracks/>

“Making Tracks” is a programme established to provide active transportation safety education for children and youth across Nova Scotia. The programme focuses on four main modes of active transportation: walking; bicycling; in-line skating and skateboarding. The programme encourages both children and adults to use active transportation; outlining the benefits to the individual, the environment and the community.

Mark Wide Curb Lanes

“Mark Wide Curb Lanes” by Richard Drdul community transportation planning offers an alternative to conventional bike lanes. In many situations it is not possible to implement bike lanes for economical or practical reasons. Drdul provides a description of the wide curb lanes and outlines the benefits, proper usage, and examples of wide curb lanes currently in use.

Road Diets: Fixing the Big Roads

<http://www.walkable.org/assets/downloads/roaddiets.pdf>

“Road Diets: Fixing the Big Roads” by Dan Burden and Peter Lagerwey investigates the advantages of reducing four lane roads to three lane roads, making them more accessible for pedestrian and bicycle traffic. The paper outlines the benefits of thinning the roads and provides examples of “Road Diets” across North America.

The Street Design Policies for the Metro area

The Street Design Policies for the Metro area (Clackamas, Multnomah, Washington and Portland USA) provides the design plan for new street development and improvement in these regions. The plan includes the implementation of throughways, boulevards and mixed use corridors.

The Sustainable Transportation Strategies from the City of Vancouver’s Green Municipal Fund final report on Sustainable Transportation in Southeast False Creek

http://gmf.fcm.ca/files/Capacity_Building_Transportation/SustainableTransportation-en.pdf

“The Sustainable Transportation Strategies from the City of Vancouver’s Green Municipal Fund final report on Sustainable Transportation in Southeast False Creek” investigates the strategies purposed for sustainable development in Southeast False Creek. The community suggests a variety of transportation options including options for both walking and cycling.

The Yarmouth Area Transportation Study

The Yarmouth Area Transportation Study provides a list of improvements needed for major roads in the area. The study summarises the use of each roads and offers suggestions of how the roads can be improved.

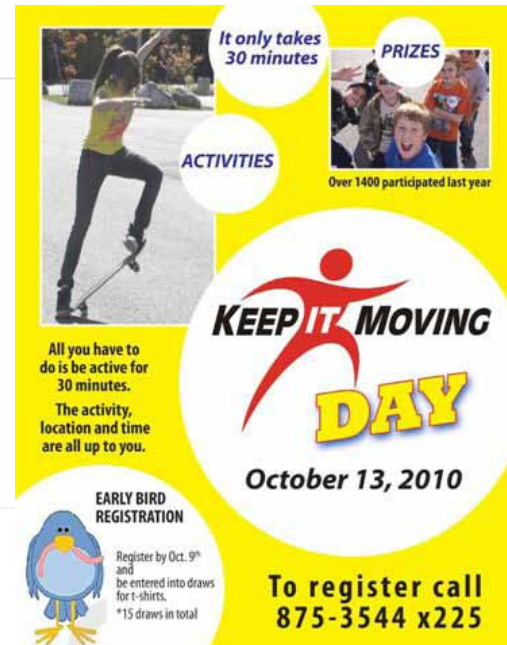
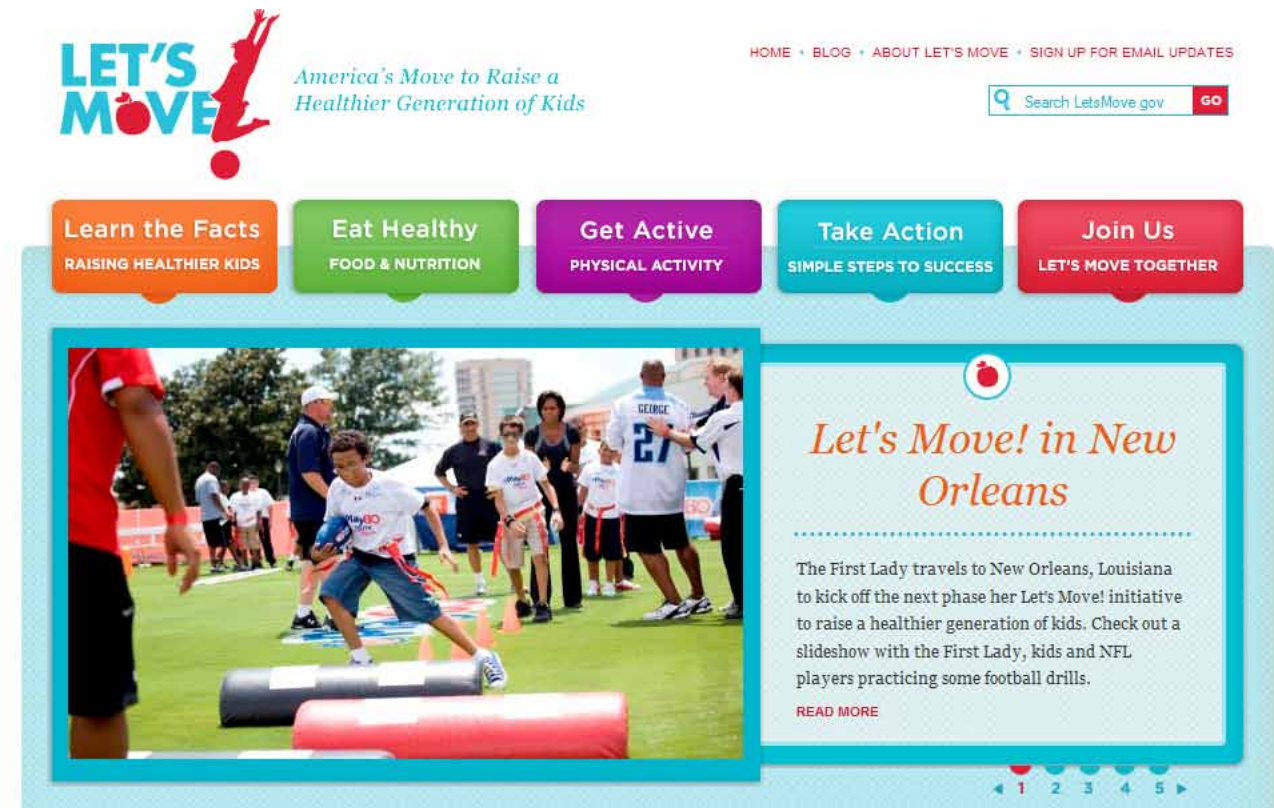
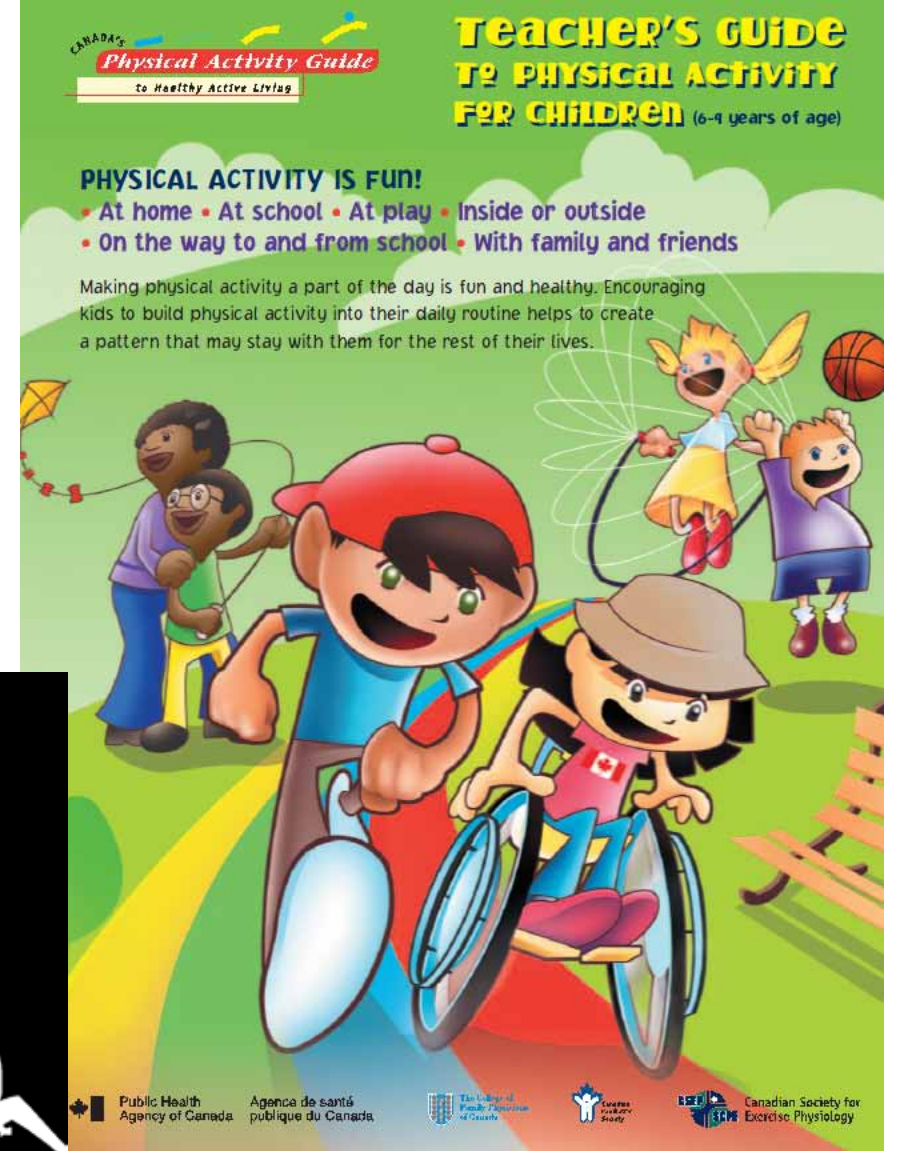
The Yarmouth County Community Health Board Community Health Plan

<http://www.swndha.nshealth.ca/pages/yarmCHB.htm>

The Yarmouth County Community Health Board Community Health Plan for 2009-2012 establishes an understanding of the composition of the communities in the region and outlines the possible health needs of those individuals. This information is gathered and used to develop an action plan to improve the health of the residents.



BIKE TO WORK







C

APPENDIX C: SURVEY SUMMARY



Yarmouth Active Transportation Master Plan

1. Are you?

	Response Percent	Response Count
Male	50.8%	91
Female	49.2%	88
answered question		179
skipped question		2

2. How old are you?

	Response Percent	Response Count
under 21	2.2%	4
21 - 34	16.2%	29
35 - 49	32.4%	58
50 - 64	36.3%	65
65+	12.8%	23
answered question		179
skipped question		2

3. How many people live in your household?

	Response Percent	Response Count
1	10.6%	19
2	51.4%	92
3	12.8%	23
4	19.0%	34
5 or more	6.1%	11
answered question		179
skipped question		2

4. How often do you participate in the following activities?

	Daily	Weekly	Monthly	Yearly	Never	Response Count
Walking	55.6% (90)	35.2% (57)	8.0% (13)	1.9% (3)	0.0% (0)	162
Hiking	0.8% (1)	15.7% (20)	26.8% (34)	29.9% (38)	27.6% (35)	127
Cycling	6.6% (9)	19.9% (27)	10.3% (14)	25.0% (34)	39.7% (54)	136
Inline Skating	0.0% (0)	0.9% (1)	1.8% (2)	3.5% (4)	93.9% (107)	114
Running	12.5% (16)	18.0% (23)	7.8% (10)	9.4% (12)	53.1% (68)	128
Ice Skating	1.6% (2)	12.2% (15)	6.5% (8)	26.8% (33)	54.5% (67)	123
Skateboarding	0.0% (0)	0.0% (0)	1.8% (2)	0.9% (1)	98.2% (112)	114
answered question						165
skipped question						16

5. How do you get around Yarmouth? (check all that apply)

	Response Percent	Response Count
Car / Truck	97.6%	162
Bicycle	22.3%	37
Public Transit	2.4%	4
Walking	75.9%	126
Inline Skating / Skateboard	1.2%	2
Wheelchair / Motorized Scooter	0.0%	0
ATV	1.2%	2
Other (please specify)		7
answered question		166
skipped question		15

6. How do you MOST FREQUENTLY get around Yarmouth?

	Response Percent	Response Count
Bicycle	2.4%	4
Public Transit	0.0%	0
Car	86.1%	143
Walking	11.4%	19
Wheelchair / Motorized Scooter	0.0%	0
Inline Skating / Skateboard	0.0%	0
ATV	0.0%	0
Other (please specify)		1
answered question		166
skipped question		15

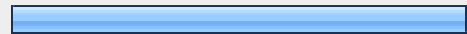

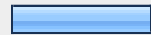
7. What is the approximate distance from your home to your work / school?

	Response Percent	Response Count
Less than 2 km	23.9%	38
Between 2 and 5 km	15.7%	25
Between 5 and 10 km	19.5%	31
Between 10 and 25 km	23.3%	37
Greater than 25 km	8.2%	13
Not sure	9.4%	15
answered question		159
skipped question		22

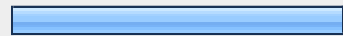


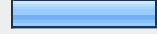

8. On average, how long is your typical commute (one way) to your work / school?

	Response Percent	Response Count
Less than 5 minutes	22.6%	36
Between 5 and 10 minutes	30.8%	49
Between 10 and 20 minutes	23.9%	38
Between 20 and 30 minutes	10.7%	17
More than 30 minutes	5.7%	9
Not sure	6.3%	10
answered question		159
skipped question		22

9. Are you interested in using alternative (active transportation) strategies to get around Yarmouth?

	Response Percent	Response Count
Yes 	68.9%	113
No 	10.4%	17
Not Sure 	20.7%	34
answered question		164
skipped question		17

10. Why not? (please check all that apply)

	Response Percent	Response Count
Destinations are too far 	50.0%	7
Destinations are not connected by trails / sidewalks 	14.3%	2
Physically too demanding 	7.1%	1
Habitual use of Vehicle 	21.4%	3
No interest 	7.1%	1
Other (please specify)		4
answered question		14
skipped question		167

11. Please indicate your comfort level with regards to Walking for each of the following statements:

	Very comfortable	Comfortable	Uncomfortable	Very uncomfortable	Not sure / Not applicable	Response Count
Walking on a paved multi-use trail	61.5% (99)	28.6% (46)	5.0% (8)	0.0% (0)	5.0% (8)	
Walking on a gravel multi-use trail	63.4% (102)	31.7% (51)	3.1% (5)	1.2% (2)	0.6% (1)	
Walking on the sidewalk	67.7% (109)	29.2% (47)	3.1% (5)	0.0% (0)	0.0% (0)	
Walking on the shoulder of a rural road	9.4% (15)	20.0% (32)	38.1% (61)	31.3% (50)	1.3% (2)	
Walking on the shoulder of a town road	7.5% (12)	17.5% (28)	40.6% (65)	33.1% (53)	1.3% (2)	
answered question						
skipped question						

12. Please indicate your comfort level with regards to Cycling for each of the following statements:

	Very comfortable	Comfortable	Uncomfortable	Very uncomfortable	Not sure / Not applicable	Response Count
Cycling on a paved multi-use trail	47.8% (75)	21.7% (34)	3.2% (5)	0.0% (0)	27.4% (43)	
Cycling on a gravel multi-use trail	29.7% (46)	29.7% (46)	12.9% (20)	1.3% (2)	26.5% (41)	
Cycling on the sidewalk	10.2% (16)	14.6% (23)	28.7% (45)	18.5% (29)	28.0% (44)	
Cycling on residential (minor) streets	24.4% (38)	39.7% (62)	8.3% (13)	1.3% (2)	26.3% (41)	
Cycling on arterial (major) streets, with painted bike lanes	26.3% (41)	33.3% (52)	8.3% (13)	2.6% (4)	29.5% (46)	
Cycling on arterial (major) streets, with wider curb lanes / shoulders	14.9% (23)	35.1% (54)	20.1% (31)	3.2% (5)	26.6% (41)	
Cycling on arterial (major) streets, sharing the road with vehicles.	3.9% (6)	21.3% (33)	24.5% (38)	23.2% (36)	27.1% (42)	
	<i>answered question</i>					
	<i>skipped question</i>					

13. Please indicate your level of agreement with the following statements, regarding initiatives that might encourage you to walk or bike more often.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Response Count
Nothing will encourage me to walk or bike more often.	0.7% (1)	6.0% (9)	14.1% (21)	38.3% (57)	40.9% (61)	149
No improvements are necessary, the existing trails & sidewalks are meeting my needs.	5.3% (8)	6.7% (10)	16.7% (25)	38.0% (57)	33.3% (50)	150
More bike lanes or paved shoulders for cycling (on-street)	44.4% (67)	39.1% (59)	13.2% (20)	1.3% (2)	2.0% (3)	151
More multi-use trails (off-street)	41.7% (63)	43.0% (65)	13.9% (21)	0.7% (1)	0.7% (1)	151
More / improved sidewalks	44.7% (67)	41.3% (62)	12.0% (18)	0.7% (1)	1.3% (2)	150
Better education for motorists	40.8% (62)	36.8% (56)	19.1% (29)	2.6% (4)	0.7% (1)	152
Better education for cyclists and pedestrians	32.5% (49)	35.1% (53)	25.8% (39)	6.0% (9)	0.7% (1)	151
Improved signage for bike and pedestrian routes	38.4% (58)	39.1% (59)	20.5% (31)	0.7% (1)	1.3% (2)	151
Secure bicycle parking at work / school	25.3% (38)	44.0% (66)	29.3% (44)	1.3% (2)	0.0% (0)	150
Shower & Locker Rooms at Work / School	14.8% (22)	37.6% (56)	38.9% (58)	6.7% (10)	2.0% (3)	149
Reduced Traffic Speeds	14.7% (22)	34.7% (52)	36.0% (54)	10.7% (16)	4.0% (6)	150
Improved Road Maintenance	53.7% (80)	38.3% (57)	6.7% (10)	0.0% (0)	1.3% (2)	149
Improved Sidewalk & Pathway Maintenance	46.0% (69)	39.3% (59)	12.7% (19)	0.7% (1)	1.3% (2)	150
Cycling and Trails Route Map	27.0% (40)	47.3% (70)	20.9% (31)	3.4% (5)	1.4% (2)	148
More connections to key destinations (i.e. shopping, school, downtown)	36.4% (55)	42.4% (64)	20.5% (31)	0.0% (0)	0.7% (1)	151
More bicycle parking at key destinations	29.1% (44)	50.3% (76)	19.2% (29)	1.3% (2)	0.0% (0)	151
	Other (please specify)					10

15. What are the top three locations or corridors in Yarmouth that require new or better connected trails, bikeways, or sidewalks?

	Response Percent	Response Count
1	100.0%	111
2	85.6%	95
3	70.3%	78
<i>answered question</i>		111
<i>skipped question</i>		70

16. What do you think will be the three most significant obstacles or challenges to improving Yarmouth's Active Transportation network?

	Response Percent	Response Count
1	100.0%	113
2	87.6%	99
3	69.0%	78
<i>answered question</i>		113
<i>skipped question</i>		68

17. What do you think are the three key initiatives or programs that will encourage Active Transportation in Yarmouth?

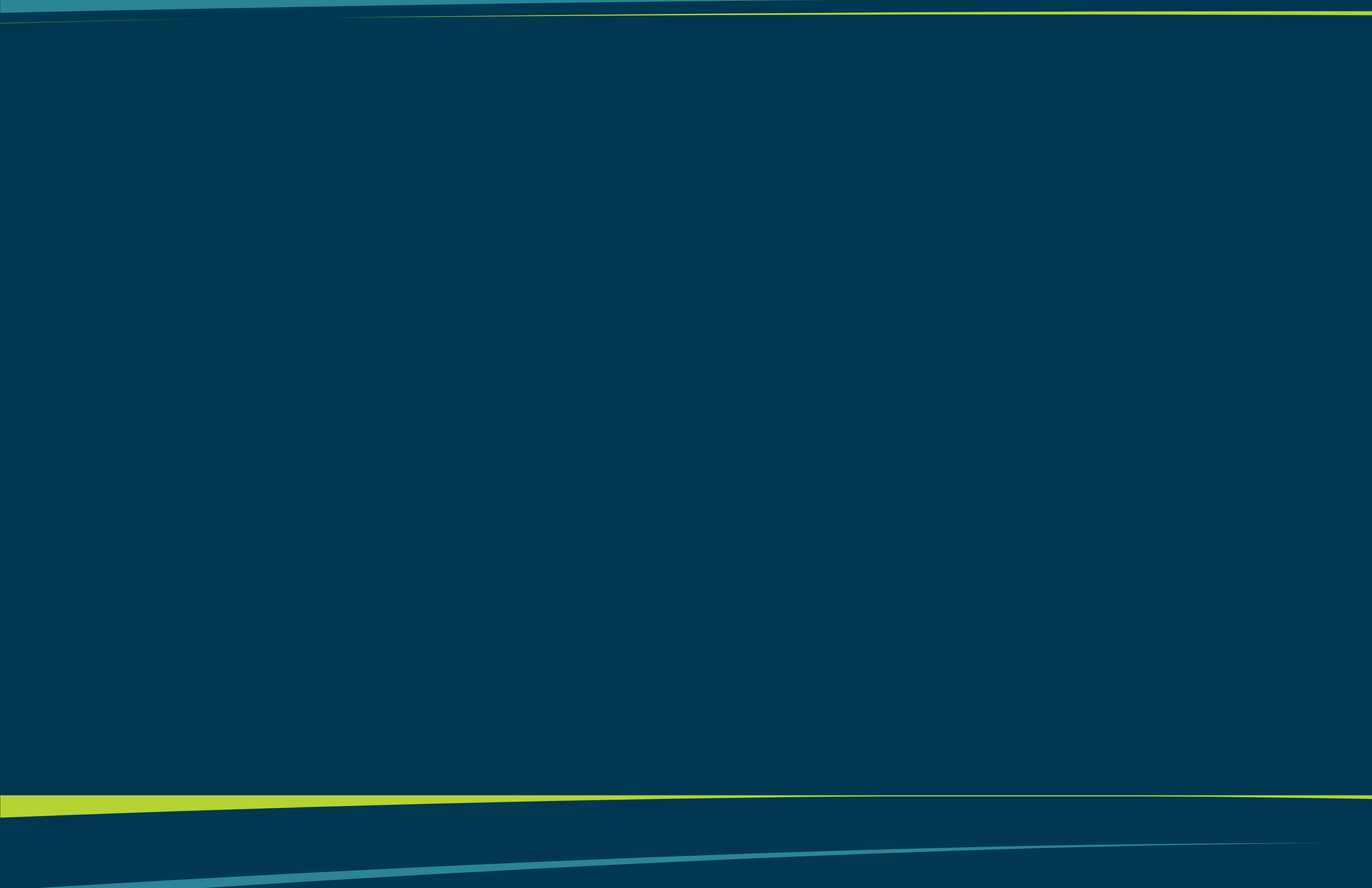
	Response Percent	Response Count
1	100.0%	101
2	78.2%	79
3	64.4%	65
<i>answered question</i>		101
<i>skipped question</i>		80

answered question 153

skipped question 28

14. Please indicate your level of agreement with the following statements, regarding issues that may make you drive your vehicle less.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Response Count
Fuel prices greater than \$1.50 / L	17.7% (26)	36.1% (53)	26.5% (39)	15.0% (22)	4.8% (7)	147
Fuel prices greater than \$2.00 / L	26.2% (38)	35.9% (52)	20.7% (30)	11.7% (17)	5.5% (8)	145
Convenient Public Transit System	24.7% (36)	42.5% (62)	21.2% (31)	9.6% (14)	2.1% (3)	146
Access to a carpool	10.7% (16)	22.1% (33)	42.3% (63)	22.1% (33)	2.7% (4)	149
Access to a Car Share (a vehicle available for communal use)	10.8% (16)	22.3% (33)	39.9% (59)	21.6% (32)	5.4% (8)	148
Improved Trail & Bikeway system in Yarmouth	37.2% (55)	33.1% (49)	23.6% (35)	4.1% (6)	2.0% (3)	148
Nothing will encourage me to drive my vehicle less often	3.4% (5)	8.9% (13)	25.3% (37)	37.7% (55)	24.7% (36)	146
Other (please specify)						7
<i>answered question</i>						152
<i>skipped question</i>						29





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