

# Ladysmith Bicycle Plan

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Submitted by:

**HB LANARC**

**PLANNING DESIGN SUSTAINABILITY**

with Richard Drdul, P.Eng.

Community Transportation Planner

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# 1. EXECUTIVE SUMMARY

This document presents an Updated Bicycle Plan for Ladysmith, BC. The plan consulted with Town staff and the public in order to capture community priorities and concerns, and to create a Bicycle Plan that works for the end-users.

## 1.1.1. Goals and Objectives

The two key goals of the Ladysmith Bicycle Plan are to:

🚲 *increase bicycle trips*; and

🚲 *increase cyclist safety*.

## 1.1.2. Approach

The approach taken for this plan has been to create a network of attractive facilities that are safe and separated from traffic wherever possible. These high-quality bike routes create a “brand” for cycling in Ladysmith – cyclists, drivers and all other road users know that a designated bike route means something more attractive to cyclists than a typical Ladysmith street.

Separated facilities are increasingly being shown to be the most desirable type of facility for the broadest range of cyclists. It allows those that aren’t seasoned veterans of heavy traffic arterials to feel comfortable getting on a bike.

## 1.1.3. Bicycle Route Network

The key feature of the bicycle route network is a connected “spine” of high-quality facilities, linking major destinations. Additional routes commonly used by cyclists connect with this official network.

## 1.1.4. Implementation

A prioritized phasing of route facility construction is introduced, based on the importance of each route in creating a high-quality network, anticipated road maintenance and upgrading, and public feedback. The Bayview connection, Methuen Street and Sixth Avenue routes are the major priorities for official bicycle routes with separated facilities. First Avenue and Chemainus Road routes are identified as second phase priorities. In the future, all of the “routes commonly used by cyclists” should be considered for upgrading and inclusion in the designated bicycle route network.

Average cost/km were prepared for the types of facilities proposed and can be used by Town staff preparing budgets. A list of potential funding options is included.

Bicycle-friendly policies can be used as a tool to help meet community objectives for GHG reductions, community health and livability, among others. A set of policy-specific recommendations are presented, as well as some potential revisions to the existing OCP to acknowledge the goals of the Bicycle Plan.

Finally, a system of monitoring and evaluation is introduced to measure the success of the Bicycle Plan, and to ensure that progress is made towards reaching the Plan’s goals.

## 1.1.5. Design Guidelines and Engineering Standards

A collection of potential cross-sections were developed for separated facilities of different types. These include typical 8 - 12 m road ROW widths. The cross-sections to inform the engineering standards are included in the Appendix. A separate document includes Bicycle Facility Design Guidelines.

## 2. INTRODUCTION

The Ladysmith Bicycle Plan was written in December 2009 by HB Lanarc with Richard Drdul for the Town of Ladysmith. A previous Bicycle Plan for the town was written in 2000; the 2009 plan was created to update and revise the previous plan to reflect changes in local context, issues and priorities over the last decade. These changes can be used to further the goals and objectives identified in the Official Community Plan (OCP).

During the process, Town staff from Development Services, Engineering and Public Works Parks, and Recreation and Culture were consulted; a public presentation and workshop was held; information and public input opportunities were presented on the project website; and a presentation and workshop was conducted with a grade 10 class at Ladysmith Secondary School (refer to the *Public Consultation Report*, included in the Appendix). This consultation process has allowed the consultants to co-create a plan with those that will be the end users – cyclists both present and future.

### 2.1. What is a Bicycle Plan?

The key component of the Bicycle Plan is a network of bicycle routes. The route network incorporates a combination of separated cycle tracks and multi-use pathways connecting major destinations in Ladysmith. The plan also identifies:

- 🚲 policies to improve conditions for cyclists, to promote and encourage people to cycle, and to educate cyclists and motorists as to how to safely share the road;
- 🚲 end-of-trip facilities to provide parking for cyclists at key destination;
- 🚲 guidelines for designing bicycle facilities, based on best practices;
- 🚲 an implementation strategy incorporating prioritized phased implementation;
- 🚲 a funding strategy identifying alternative funding to supplement tax-base funding; and
- 🚲 a monitoring program to track increased bicycle use as a result of the Bicycle Plan.

### 2.2. Bicycle Planning Principles

The Bicycle Plan is based on several fundamental principles of bicycle and pedestrian planning, as described below. These principles come from lessons learned in communities across North America, and are used consistently within current bicycle planning practices.

- 🚲 *All cyclists should be able to make use of the bicycle network.* Young or old, experienced or novice, commuting or recreating – the network should accommodate all riders.
- 🚲 *The most attractive facility is one separated from traffic.* Although there will always be some expert cyclists who feel comfortable riding along high-volume roads, the majority of cyclists much prefer to be separated from traffic. However, routing cyclists away from businesses and services does them a disservice as valid users of these facilities; the best option is to acknowledge cyclists as equal members of the road network, and to provide them with facilities that make them feel comfortable using their space.

- 🚲 *Off-street facilities should be useful to all modes of active transportation.* Pedestrians, skateboarders and skaters, babies in strollers, and persons with disabilities should all be accommodated for on pathways and other off-street facilities. This means paying attention to design and surface material, among other considerations.
- 🚲 *Intersections are as important as routes.* An effective crossing treatment can help avoid the majority, and the most severe, of crashes. These most often occur where bicycle routes along local streets and pathways intersect major roads.
- 🚲 *The bicycle network should connect all important destinations.* Just as the road network provides access to commercial, office, institutional, cultural and recreational destinations throughout Ladysmith, so should the bicycle network.
- 🚲 *It is important to provide a “quality” cycling experience.* Perceptions of safety, aesthetics, traffic volumes and noise all influence the routes cyclists prefer to use, and whether or not they choose to ride.

### 2.3. Goals and Objectives

There are two primary goals the Bicycle Plan seeks to achieve.

- 🚲 ***Increase bicycle trips.*** The primary goal of the plan is to increase bicycle use for travel between destinations in Ladysmith. This will also encourage other active means of travel, including walking and rolling (e.g. inline skates, wheelchairs) and promote outdoor physical activity for recreational and health purposes.
- 🚲 ***Increase cyclist safety.*** The design of bicycle facilities can work to reduce the number of incidents between cyclists and motorists, and create a greater feeling of comfort and safety for many cyclists and potential cyclists – further increasing the number of bicycle trips.

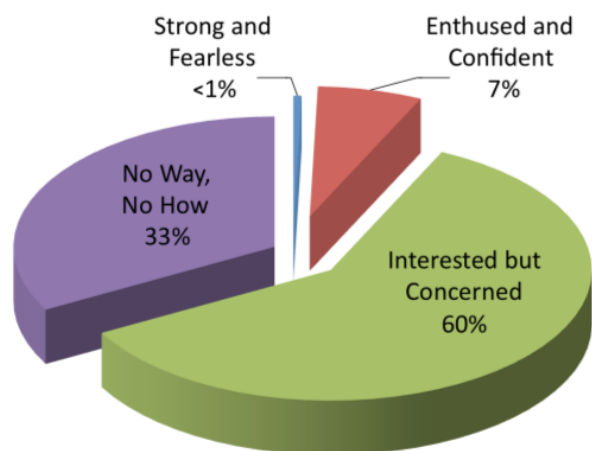
A number of objectives support these goals, including:

- 🚲 identify problem spots and issues with the existing network, and suggest improvements;
- 🚲 identify new routes, connections and infrastructure to add to the bicycle network;
- 🚲 identify supporting policies;
- 🚲 determine priorities for implementation and order-of-magnitude costs; and
- 🚲 develop design guidelines to address a wide range of circumstances.

### 2.4. Target Markets for Cycling

Recent work in Portland, Oregon (a Gold-level Bicycle-friendly Community) has divided the population into segments according to their likelihood of riding – or “target markets” (see Figure 1). This categorization is also being used in Metro Vancouver by Translink in their Regional Cycling Strategy. The findings from this work suggest that the largest potential market for cycling (nearly two-thirds of the total population) is influenced primarily by bicycle facilities that are separate from traffic.

Figure 1 — Target Markets for Cycling



- 🚲 “*Strong and fearless*” cyclists will cycle in any condition, regardless of whether or not there is a dedicated bicycle facility. These cyclists account for less than 1% of the population.
- 🚲 “*Enthusied and confident*” cyclists are comfortable in traffic with appropriate facilities, such as bicycle lanes. These cyclists account for approximately 7% of the population.
- 🚲 The “*interested but concerned*” market amounts to approximately 60% of the population, and is comprised of cyclists and persons who are not currently cyclists but are interested in cycling. This group is not comfortable in traffic, and are not attracted to bicycle lanes, paved shoulders or other conventional on-street bicycle facilities. They prefer off-street and separated facilities, or bicycle routes on low-volume, low-speed roads.
- 🚲 The “*no way, no how*” group represents approximately one-third of the population who have no interest in cycling.

## 2.5. Community Context

The 2007 *Community Energy and Emissions Inventory* for Ladysmith reported that “on road transportation” accounts for 81% of the total community GHG emissions by sector. Based on 2006 census data, bicycles account for 0.3% of all trips to work in Ladysmith. The provincial average is 2%, though many BC communities are approaching higher amounts. This indicates that Ladysmith has a large potential for community GHG reductions by transforming its local travel patterns, such as shifting vehicle trips to bicycle trips, especially for in-town travel.

As in other cities, development of bicycle routes in Ladysmith has in the past focused on conventional on-street facilities which are attractive only to a small proportion of the population. In order to attract others to cycling, the development of bicycle routes must be shifted to focus on facilities which will appeal to the “interested but concerned” target market. For the Ladysmith Bicycle Plan, this means an emphasis on off-street pathways, separated bicycle lanes or “cycle tracks,” routes on low-volume streets, and intersection and crossing treatments.

This conclusion is supported by findings from the community consultation undertaken as part of the Ladysmith Bicycle Plan process (see Appendix for full report).

## 2.6. OCP Policy Framework

In the years since the 2003 OCP was written, climate change and increased incidence of “lifestyle” diseases such as Type 2 diabetes and heart disease have emerged as issues that require strong policies and vision. The 2008 *Bill 27 Local Government (Green Communities) Statute* requires all BC municipalities to establish targets for reducing their greenhouse gas (GHG) emissions, and requires policies and actions to meet these targets; these amendments must be made to OCPs by May 2010. Active transportation (cycling and walking) has emerged as a viable strategy to assist in meeting Bill 27 targets as well as improve community health.

Throughout the current 2003 OCP, support is shown for the integration of transportation and land use planning in creating a liveable, healthy community. Commitments by the Town include:

- 🚲 Separating travel modes such as bicycle, bus, and other vehicles;
- 🚲 Reducing the exposure of a crash by minimizing the need to travel by car;
- 🚲 Reducing operating speeds using techniques such as traffic calming;
- 🚲 Achieving compatibility between a road’s use, its form and function;
- 🚲 Providing for local access and mobility of through traffic;
- 🚲 Accommodating pedestrians, cyclists and transit on the network.

(from the *2003 Town of Ladysmith OCP*, p.35).

Policies relating to pedestrian and bicycle movement, options for alternative road development standards, and promotion of a greenway system currently exist. Some of the clearest examples of the policy directions are:

The Town will encourage greenway designation and development at time of subdivision. Where possible, greenways will be used for cycling and walking to link different neighbourhoods.

Residents will be encouraged to reduce their reliance upon private vehicles by promoting alternative and multi-modal forms of transportation and complete neighbourhoods.

(from *Section 3.3.3 Environment Policies, 2003 Town of Ladysmith OCP*)

Pedestrian and bicycle movement will continue to be promoted throughout Ladysmith as provided in the Bicycle Plan.

The Town will ensure that appropriate transportation planning and design standards are met, including the exploration of alternative development standards.

The Town will continue to promote Safety Conscious Planning Principles, including all modes of transportation such as vehicle, transit, pedestrian and bike travel.

The Town will encourage land use and transportation initiatives that support Travel Demand Management and Transportation System Management.

Safe and efficient multi-modal access to the Waterfront will be promoted.

(from *Section 3.4.3 Transportation Policies, 2003 Town of Ladysmith OCP*)

## 3. BICYCLE NETWORK

This section describes the various components of the Bicycle Network Plan, including examples of bicycle and parking facilities and a map of the proposed bicycle routes.

### 3.1. Types of Bicycle Facilities

Within the Bicycle Network Plan, bicycle routes consist of both “on-street” and “off-street” separated facilities. In addition, crossings are required where on-street and off-street routes intersect major roads. These different types of bicycle facilities are described in the following section (and can be found in more detail in the *Bicycle Facilities Design Guidelines*, found in a separate document.)

#### 3.1.1. Route Facilities



*Cycle tracks* use the existing road infrastructure, but provide a physical barrier or separation from the vehicle travel lane and from the pedestrian sidewalk. The barrier can initially be temporary to allow for a less-expensive trial of the facility type, and then upgraded to a more permanent material once the facility is finalized. The typical width of a cycle track is 3 m.



*Multi-use pathways adjacent to roads* provide separation from traffic, but are raised in height to that of a typical sidewalk. These pathways are wider than a traditional sidewalk (3 m is the desirable minimum width, though a 4 m width is preferred for higher volume pathways) and allow for both pedestrians and cyclists. Where pathways are located adjacent a railing, wall or other barrier more than 150 mm high, an additional 0.5 m of horizontal clearance should be provided.



*Multi-use pathways away from roads* are physically separated from roadways. They should be hard-surfaced, using concrete or asphalt. This means that all non-motorized users can be accommodated, including in-line skaters, persons in wheelchairs and cyclists on bicycles with narrow tires. Soft-surfaced pathways may be preferable in environmentally-sensitive areas, and are typically constructed of stable materials such as a compacted aggregate.





*Shared routes* make use of local streets and other minor roads. Because traffic volumes and speeds are generally low, cyclists and motorists are able to safely share the road. In some cases, additional traffic calming may be desired to control traffic speeds (e.g. speed humps).

### 3.1.2. Intersections and Crossings

Crossing treatments can be used at critical locations on a bicycle route or pathway where these facilities intersect major roads. Potential crossing treatments include:



*Marked crossings* are used on lower-volume roadways, where there is a need to identify the crossing to motorists. Crosswalk signage and pavement markings can be supplemented with "special crosswalk" enhancements, such as overhead internally-illuminated signs, which also shine light onto the crossing area. Marked crossings on collector roads and local streets can also be enhanced with raised crosswalks.



*Flashing lights* can be used to enhance marked crossings. Flashing lights are activated by cyclists and pedestrians prior to crossing the road, and provide additional indication to approaching motorists that the crossing is occupied.



*Signalized crossings* are used where the number of persons crossing the roadway is higher, and where traffic volumes and speeds are higher. Signalized crossings can be configured as a pedestrian signal, or with flashing amber lights. Signals can be activated by pushbutton, by detectors embedded in the roadway, or with "high tech" means such as microwave or video detection.



*Raised crossings* are typically used where pathways cross minor roads or channelized turn lanes at intersections. Raising the crossing helps to improve safety for pathway users by slowing traffic at the crossing, and increasing motorists' awareness of the crossing. Raised crossings are typically 80 mm high, with 2 m long ramps.

### 3.1.3. Parking Facilities

Cyclists, like motorists, need somewhere to safely park their “vehicle” when they arrive at their destination. There are various needs and desires for bicycle parking.



*Bicycle racks* provide convenient, short-term parking for cyclists, and can be placed in a wide range of locations. Good bicycle rack designs support the bicycle by the frame (rather than only by the wheel) and enable cyclists to lock their bicycle with a u-lock through the frame and one wheel. Bicycle racks can include an advertising panel which can also be used to provide information for cyclists, such as a map of bicycle routes.



*Secure parking* minimizes the potential for bicycle theft, which otherwise is a significant deterrent to bicycle use. Types of secure parking include bicycle lockers, bike rooms and cages, and attended facilities which operate similar to a coat check. Bicycle lockers are best suited to situations where there is a relatively low demand for secure parking dispersed over a large area. Bike rooms, bike cages and attended facilities are best suited to higher-demand locations.

## 3.2. Bicycle Routes in Ladysmith

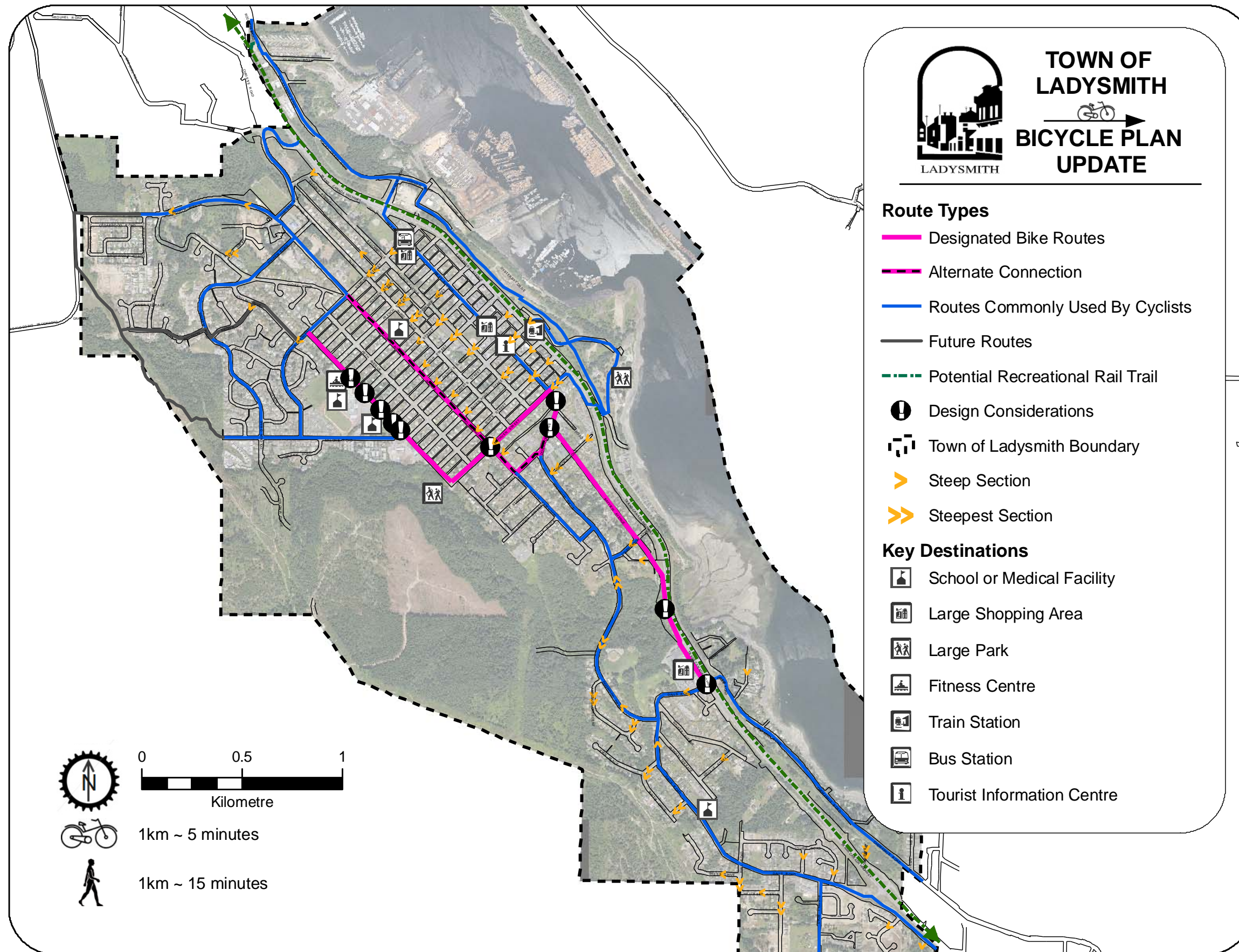
The key feature of the bicycle route network is a connected “spine” of high-quality facilities, linking major destinations. The intent in developing a system of routes primarily separated from traffic addresses a major barrier to cycling – the fear of traffic. Additional routes that are commonly used by cyclists connect with this designated bike route network, and should be integrated into the designated network as opportunities arise (e.g. through scheduled road maintenance, new development, etc.) The Trans Canada Trail regional bicycle route also feeds in to the bicycle route network, supporting regional connections in and out of Ladysmith.

Routes are divided into three categories on the Bicycle Route Network (Figure 2):

1. *Designated Bicycle Routes.* These are the spine of the network, and consist of high-quality facility types appealing to a broad spectrum of cyclists.
2. *Routes commonly used by cyclists.* While these routes are not currently part of the designated network, it is acknowledged that they are used by cyclists to connect to the network. Over time, these facilities may be added to the designated network as funding permits.
3. *Future Routes.* These routes are recommended for re-visiting in the next Bicycle Update.

Other facilities will complement and support the Bicycle Route Network, including bicycle racks at locations throughout Ladysmith and signage to identify official bicycle routes.

Figure 2 – Bicycle Route Network



## 4. IMPLEMENTATION

Developing a high-quality bicycle network will require time and funds. As a result, this section identifies several short-term key moves that will provide the greatest “return on investment” in terms of achieving the goals of the Bicycle Plan – namely, increasing cycling and improving safety.

The implementation section also acknowledges the role that policies can play in reaching the Bicycle Plan goals. Recommendations for these are described in Section 4.4.

Bicycle facilities are categorized in the following manner:

- 🚲 *Priority facilities* include improvements which should be programmed for implementation within the next five years, as funding permits. These are generally more costly improvements or require more planning and design to implement, but will provide the greatest improvements to the network. They may be able to be combined with existing planned road maintenance or upgrading when opportunities arise.
- 🚲 *Lower Priority facilities* include improvements to address existing minor safety issues and low-cost improvements which are relatively simple to implement. Although they may be easier to implement, they do not offer the same potential for network improvement as the higher priority improvements.
- 🚲 *Future improvements* include facilities that will likely be built in the 10+ year time frame. It is recommended that a future Bicycle Plan update look at these facilities in more detail.

*Design Considerations* are also indicated on the Bicycle Route Network and detailed in the following tables. These are locations where:




- a) key intersections between designated bicycle routes and higher-traffic roads call for additional treatment to ensure safety and easy linkages between routes;
- b) The designated bicycle route passes a major destination, where providing a crossing treatment would facilitate easier access to the destination; or
- c) a wider multi-use path along the highway bridge across Holland Creek would create a more pleasant user experience for cyclists and pedestrians.




While these priorities for the designated bicycle routes are recommended at the time of this report creation in December 2009, it should be noted that the Bicycle Plan should be periodically reviewed and adjusted to reflect progress, upcoming maintenance and new priorities in the network.

Priority improvements, upgrading facilities and future improvements are summarized in Tables 1, 2, and 3, below.

They are also shown on a map (Figure 3) following the tables.

Table 1 - December 2009 “Priority” Bicycle Facility Improvements

Category	Item	Existing Condition	Photo	Recommendation
Primary routes	6 <sup>th</sup> Ave	<p>Moderate-traffic street with no bicycle route facilities.</p> <p>Connects to schools, rec centre and several other institutions.</p>		<p>Separated facility along 6<sup>th</sup> Ave from Dunsmuir Cr. to Methuen St.</p> <p>Key intersection treatments at Kitchener St., Buller St., High St., Gatacre St., and Malone Rd. to connect to recreation facility and schools.</p> <p>See Appendix 5.1 for facility design ideas.</p>
	Methuen St.	<p>Low-traffic street with least uphill slope. Connects to 1<sup>st</sup> Ave downtown, underpass to waterfront, and Dogwood Dr.</p> <p>Doesn't require as many direction changes and challenging intersection crossings as the alternate “Bayview to 4<sup>th</sup> Ave Ext” route.</p>		<p>Separated facility on Methuen St. from 1<sup>st</sup> Ave to 6<sup>th</sup> Ave.</p> <p>Key intersection treatment at 1<sup>st</sup> Ave and 4<sup>th</sup> Ave.</p> <p>See Appendix 5.1 for facility design ideas.</p>
	Bayview St. Connection	<p>Low-traffic street connected to pedestrian sidewalk on old street ROW, leading to sidewalk alongside highway.</p>		<p>Combination of shared road and separated facility on Bayview St. from Davis Rd. to Methuen St.</p> <p>Traffic calming measures (speed humps) may be required along Bayview if traffic speeds are a problem.</p> <p>Additional width to be added to the existing sidewalk (3 m total width) from the</p>

				<p>end of Bayview St. alongside highway to Coronation Mall.</p> <p>Key intersection treatments at Davis Rd. and at Dogwood Dr. due to major street crossings.</p> <p>See Appendix 5.1 for facility design ideas..</p>
**Alternate Routes	4 <sup>th</sup> Ave	<p>Moderate-traffic street with bicycle route signs.</p> <p>Poor pavement condition.</p> <p>Route doesn't connect to as many major destinations as the primary "6<sup>th</sup> Ave" route.</p>		<p>Separated facility along 4<sup>th</sup> Ave from Symonds St to Methuen St.</p> <p>Key intersection treatment at Kitchener St. to connect to the school.</p> <p>See Appendix 5.1 for facility design ideas.</p>
	Bayview to 4 <sup>th</sup> Ave Ext	<p>Moderate-traffic street with median in some sections.</p> <p>Several direction changes along this route with challenging intersections (uses three different roads).</p>		<p>Separated facility connecting Bayview to 4<sup>th</sup> Ave Extension, using Dogwood and Belaire.</p> <p>Key intersection treatment at Bayview and Dogwood due to major street crossing and route direction change.</p> <p>See Appendix 5.1 for facility design ideas.</p>

\*\*Note: Alternate Routes are included as options for consideration should any road maintenance or utility upgrades occur on these routes. They are secondary (less ideal) alternatives.

Table 2 – December 2009 “Lower Priority” Bicycle Facility Improvements


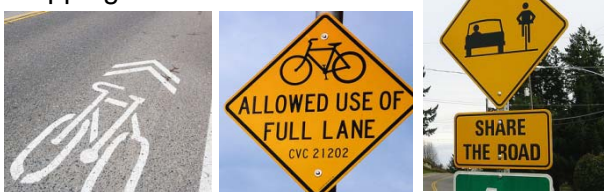


Category	Item	Existing Condition	Photo	Recommendation
Secondary routes	1 <sup>st</sup> Ave	<p>High-traffic street with angled on-street parking.</p> <p>Low traffic speeds (30 kph limit).</p> <p>Frequent pedestrian crossings.</p>		<p>Supportive signage and bicycle decals on the road.</p> <p>Increased number of bike racks to allow cyclists to park their bikes and access downtown shopping and services on foot.</p> 
	Chemainus Rd	<p>Separated multi-use and bi-directional facility.</p> <p>Multiple residential driveways crossing the facility.</p> <p>Sidewalk ramps are narrower than sidewalk width, creating a funnel.</p>		<p>Remove (or discontinue maintenance of) line &amp; decals separating pedestrians and bikes. Use signage to indicate desired pathway etiquette.</p> <p>Increase width of curb drop onto sidewalk to match width of sidewalk.</p> 

Table 3 – December 2009 “Future” Bicycle Facility Improvements




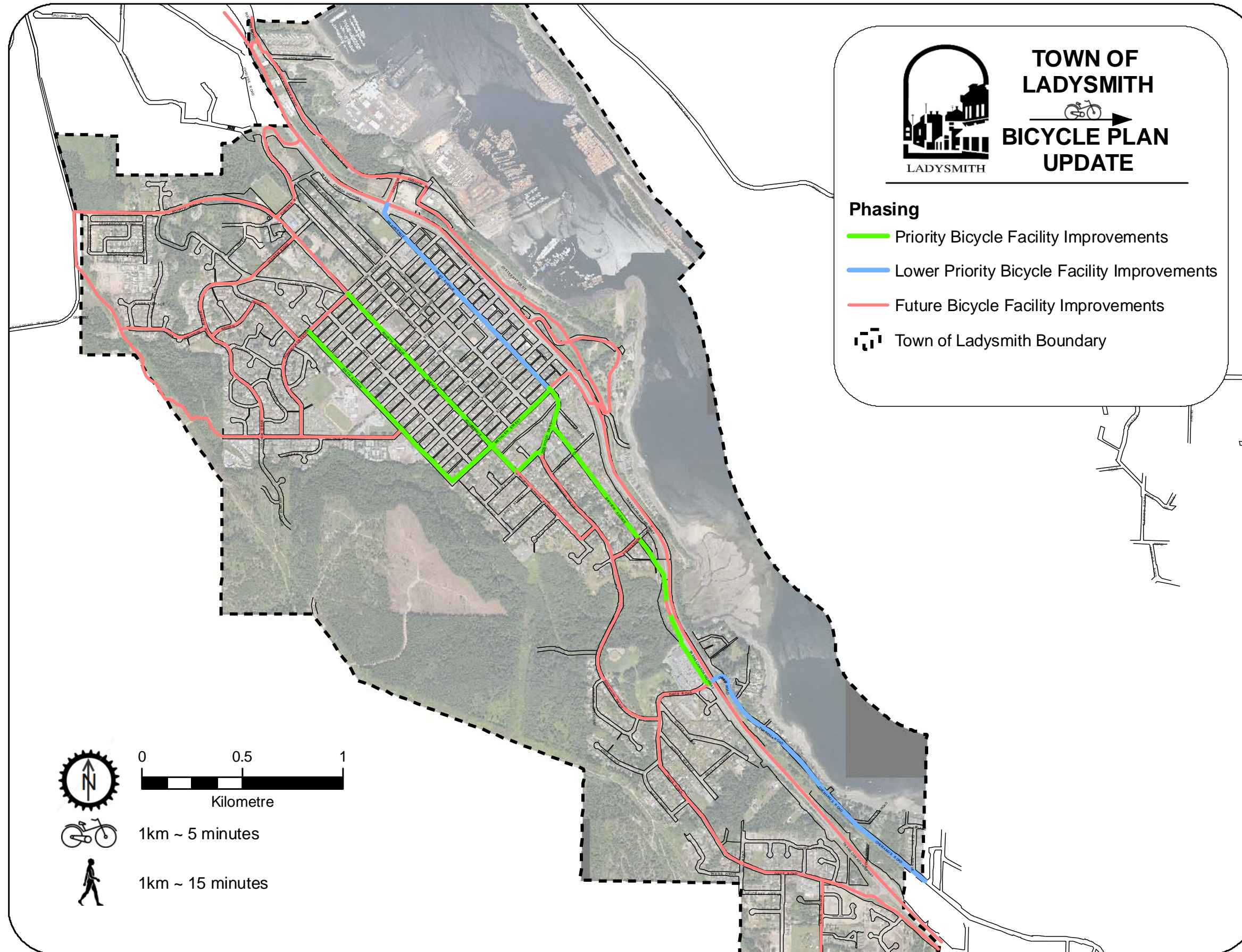
Category	Item	Existing Condition	Photo	Recommendation
Future routes	All routes commonly used by cyclists	Various street standards. Some painted shoulder bike lanes.		<p>Separated facilities.</p> <p>See Appendix 5.1 for facility design ideas.</p>
	Bayview Connection across Holland Creek bridge	<p>Pedestrian sidewalk beside highway on bridge across Holland Creek.</p> <p>Separated from highway with no-post barriers.</p>		<p>While current width on this short section of the Bayview route is sufficient for low - volume use, if usage increases, widening the pathway is recommended.</p> <p>Work with Ministry of Transportation to reduce the shoulder width on highway along the bridge section to allow no-post barrier to be moved over, leaving a wider path for multi-use bicycle and pedestrian travel.</p> <p>Mark with “path narrows” signage as needed.</p>
Recreational routes	TCT rail-trail	Active rail line with 30 m ROW.		<p>Rail trail from north to south edges of town, extending to regional TCT connections.</p> <p>See Appendix 5.1 for facility design ideas.</p>



Figure 3 – Priority Route Construction



## 4.1. Cost Estimates

Based on potential road cross-sections for the Bicycle Plan (refer to Appendix 5.1), costs per linear metre are presented below (including pavement markings and signage allowances). These costs include a typical cost for Design and Administration (15% of cost) and Contingency (15% of cost). It is important to note that these linear metre costs are intended to provide guidance for budgeting purposes only. Town of Ladysmith staff should prepare more detailed cost estimates for bicycle facilities when designs are prepared for these facilities.

🚲 **BASIC CYCLE TRACK ON EXISTING ROADWAY** (See cross-section 5.1.1 in Appendix as an example)

\$55 / linear metre

🚲 **EXPAND EXISTING ROADWAY WITH CYCLE TRACK** (See cross-section 5.1.3 in Appendix as an example)

(Adding 1.5m asphalt to existing roadway for 3m cycle track)

\$175 / linear metre

🚲 **MULTI-USE PATHWAY ALONG ROAD** (See cross-section 5.1.5 in Appendix as an example)

2.5m asphalt \$215 / linear metre

3m asphalt \$249 / linear metre

🚲 **INFILTRATION SWALE (BIO SWALE)** (See cross-sections 5.1.8 in Appendix as an example)

\$190 / linear metre

🚲 **PUSH BUTTON SIGNALIZED CYCLE CROSSING (with solar panel LED)**

\$15,600

## 4.2. Bicycle-Supportive Policies

While the Town of Ladysmith does have existing policies and bylaws that are complementary towards the goals of the Bicycle Plan, it is recommended that a strong vision for a bicycle-friendly community be more fully integrated into all facets of planning and design. This stretches from the high-level vision and guiding principles, into the more detailed policies and bylaws.

This section includes recommended policy refinements and additions at both high-level and strategic levels. Specific text changes are indicated in ***italic bold***, and current page numbers in the 2003 OCP are given.

## 4.2.1. High Level Recommendations

### Vision Statement (p.i)

- Ladysmith is a complete community that balances the need for economic growth with environmental [**and climate**] protection, ensuring a diversity of housing [**and transportation choice**], while maintaining and developing the necessary support facilities. Ladysmith supports cultural and environmental stewardship through partnerships that foster community ownership. Economic benefits are derived from planned, sustainable growth and development.

### Guiding Principles

- It is recommended that an additional guiding principle be written that relates directly to climate protection and GHG reduction. This would reference the provision of alternative transportation, including cycling, walking, and transit, as a major priority.

### Language used

While both walking and cycling are promoted in the OCP, often these two modes are grouped together under the term “pedestrian.” It should be noted that the needs of these two transportation modes, while sometimes complementary, are not the same. Language should be used that reflects this distinction. For example:

#### Key Issues

- 1.8.4 Transportation (p.9)

#### Pedestrians and Bicycles

In the past, sidewalks and bike pathways were not built in all new developments. Community feedback suggests that sidewalks and bikeways are important to ensure safe alternative modes of transportation. Pedestrian and bicycle movement through the community is desirable so that traffic is reduced and personal health is promoted. The Community Plan should consider means of promoting a pedestrian [**and bicycle-friendly**] environment.

#### 3.4.1 Transportation Goals (p.36)

- Ladysmith will . . .
  - promote downtown parking and safe and efficient pedestrian and vehicle movement to ensure that the Downtown remains a vibrant commercial district.
  - promote Smart Growth planning principles by integrating transportation and land use decision making, including the exploration and adoption of

alternative road standards, bicycle **[facilities<sup>1</sup>]**, pedestrian movement and mixed use so that residents can work and shop close to home.

- explore alternative forms of Downtown parking, including off street parking facilities.
- explore and promote its regional role as a transportation centre.
- explore the development of Transit.
- promote pleasant safe pedestrian **[and bicycle]** travel as a primary means of movement and an important quality of life attribute.

#### 3.4.2 Transportation Objectives (p.37)

- 5. Develop supportive land use and transit policies, including **[streets that support cycling and walking]**, identification of appropriate transit routes and bus stops, and transit friendly land use patterns.
- 9. Create human scale development that encourages walking **[and cycling]**.

#### 3.4.3 Transportation Policies (p.38)

- 12. The Town will continue to promote Ladysmith as a pedestrian **[and cyclist]** friendly community in which pedestrian **[and cycling]** facilities are established and integrated with planning for transit service.
- 16. Future waterfront development will be pedestrian **[and cyclist]** friendly and provide public access to the water's edge.

### 4.2.2. Policy-specific Recommendations

🚲 The Town will act on the recommendations of the 2009 Ladysmith Bicycle Plan update.

*To transform a plan into reality takes Council support and staff direction.*

🚲 The Town will explore a Complete Streets strategy that supports all users (cyclists, pedestrians, transit, vehicles) on planned and current streets. Complete Streets solutions will be context specific.

*This would update the road network functional classification to a more integrated user approach, acknowledging needs of all users rather than prioritizing vehicles.*

🚲 The Town will explore partnerships to offer school-age bicycling safety. Potential partners include ICBC and the Green Communities Active & Safe Routes to School program.

*Increasing confidence and safety on bicycles at a young age is important for developing the skills to commute by bike throughout life; it also provides travel independence for older children and youth.*

---

<sup>1</sup> Currently, the text refers to bicycle "lanes." It is noted that a bicycle lane is one type in a suite of bicycle facilities, which should be adopted according to specific context.

- 🚲 The Town will consider offering Bike Safety courses (e.g. CAN-BIKE) and bicycle repair courses through its recreation programming.

*Empowering cyclists with necessary skills to ride confidently in traffic and to maintain their bicycles are basic ingredients to increasing the number of cyclists in town.*

- 🚲 The Town will consider including an End of Trip facility requirement in the Zoning Bylaw, requiring commercial, institutional, mixed use, and multifamily residential developments to provide covered bicycle parking and other facilities (e.g., showers, change rooms).

*This could be in exchange for a reduction in parking requirements or density bonusing. Reduced parking requirements and cash-in-lieu reserve funds to support alternative transportation are encouraged in Bill 27.*

- 🚲 The Town will provide bike parking racks at all major civic destinations, including provisions for weather protection whenever possible.

*All cyclists are pedestrians at some point in their trip, and they require safe, secure locations to store their bike. Offering weather protected parking reduces barriers to cycling in poor weather.*

- 🚲 The Town will integrate a regular maintenance program for bicycle routes (sweeping and lane/signage repainting) into its existing public works maintenance program.

*Keeping bicycle routes clean and open is imperative to them being used. Broken glass, gravel, and other debris on the road can be dangerous to cyclists.*

- 🚲 The Town will explore requirements for developers to integrate cycling facilities into proposed developments. Suggestions include reduced driveway entrance curb cuts along designated bicycle routes to limit vehicular crossing, and provision of adequate pathways and other pedestrian and bicycle facilities.

*Development Cost Charges can be used to fund bicycle facility creation and improvement.*

- 🚲 The Town will promote active transportation to the public.

*A community awareness or social marketing campaign for healthy active lifestyles such as walking and cycling can help increase public health as well as encourage people to try alternate modes of transportation. A promotion campaign may involve partnering with other groups and/or seeking funding to implement new programs.*

- 🚲 The Town will promote cycling through special events, such as a Bike to Work Day or week. Events can be accompanied by food, workshops, music, and other programming to provide a festive atmosphere.

*Cycling is still often seen as a fringe or purely recreational activity. "Normalizing" transportation cycling contributes to increased acceptance and community uptake.*

- 🚲 The Town will support the existing cycling community to form a Cycling Advisory Committee to liaise with Town staff on cycling-related issues.

*A formalized committee will assist the Town with advice and guidance, and will show a commitment to becoming a cycling-friendly community.*

- 🚲 While the Bicycle Plan focuses primarily on commuter cyclist routes, the Town acknowledges the need for recreational cycling activities and will pursue opportunities for recreational trails.

*The existing railway ROW provides an excellent opportunity for a community recreational trail.*

### **4.3. Funding Opportunities**

The Town of Ladysmith should pursue all available public and private sector sources of funding for bicycle facilities and programs, including the potential sources of funding identified below. It is important to note that to take advantage of many of these public sector funding opportunities requires that the Town have previously completed detailed designs and corresponding accurate cost estimates. The costs of preparing detailed designs are typically not eligible for cost share funding — only the capital costs of construction are eligible.

#### **Funding Options**

- 🚲 *Shifting priorities for the municipal transportation budget.* The Town should consider shifting a percentage of its current budget spent on road infrastructure to focus on active transportation improvements such as cycling and pedestrian infrastructure. This is increasingly being done by municipal governments that want to see real change in their modal split. Edmonton City Council recently endorsed 1.5% of the transportation department's capital budget to be directed at active transportation projects within the city (this amounts to \$22 million). Councillors recommended ramping up this amount to 5% between 2012 and 2022.
- 🚲 *LocalMotion* is a provincial program intended to improve air quality, improve safety, reduce energy consumption and encourage British Columbians to be more active. The program provides \$40 million for investment in capital projects, including bicycle facilities, pathways and greenways, and projects that improve accessibility for people with disabilities. Applications for LocalMotion grants are based on a 50/50 provincial/municipal cost-sharing basis, with a provincial contribution of up to \$1 million a year. The total \$40 million is available over four years.
- 🚲 *BikeBC* is a recently-announced program which provides a total of \$31 million for bicycle-related infrastructure throughout BC. Details regarding the program have not yet been published.
- 🚲 *The Cycling Infrastructure Partnerships Program (CIPP).* Through this program, the Ministry of Transportation and Infrastructure provides up to 50% cost-sharing (to a maximum of \$250,000 per project) for new and improved bicycle facilities on secondary highways and classified arterials. Under the roads section of the Provincial Revenue Share Act, grants are awarded to assist in the development of major municipal roads, and bicycle facilities are eligible under this program.
- 🚲 *LiveSmart BC.* The LiveSmart BC Green Cities Awards is a program offering funds to leading edge communities for initiatives aimed at making them greener and healthier.

- 🚲 *Federal programs.* At any given time, there are usually one or more Federal grant programs for which bicycle facilities would be eligible. As an example, in the past, Environment Canada provided grants through the Environmental Partners Fund for bicycle-related projects which demonstrated a benefit to the environment and which formed partnerships with the community. It is important to note that eligibility for some Federal programs is limited to not-for-profit organizations. By forming partnerships with local not-for-profit organizations, the Town can access a number of alternative funding sources and grant programs for bicycle projects. It is important to note that because the primary applicant for funds is the not-for-profit group, they are nominally in charge of the project.
- 🚲 *Infrastructure Canada* manages several programs which provide funding for environmental and local transportation infrastructure projects in municipalities across Canada. Typically, the Federal government contributes one-third of the cost of municipal infrastructure projects. Provincial and municipal governments contribute the remaining funds, and in some instances, there may be private sector investment as well.
- 🚲 *Green municipal funds.* The Federation of Canadian Municipalities manages the Green Municipal Fund, with a total allocation of \$550 million. This fund is intended to support municipal government efforts to reduce pollution, reduce greenhouse gas emissions and improve quality of life. The expectation is that knowledge and experience gained in best practices and innovative environmental projects will be applied to national infrastructure projects.
- 🚲 *Rural Infrastructure Fund.* The Canada/BC Municipal Rural Infrastructure Fund is a grant program for infrastructure in communities with populations less than 250,000. Its purpose is improving municipal and rural infrastructure to ensure that communities are sustainable, competitive and healthy centres of economic growth.
- 🚲 *ecoACTION.* EcoMOBILITY is an initiative under the Canadian ecoACTION program aiming to reduce passenger transportation emissions by promoting less polluting forms of transportation, such as walking, cycling, public transit and ridesharing.
- 🚲 *ICBC* has in the past provided funding for bicycle facilities, particularly where these have the potential to reduce crashes and claims costs to ICBC. Funding is available through ICBC's Road Improvement Program and Safer City Program.
- 🚲 *New developments.* As part of new developments in Ladysmith, the Town can negotiate with developers to provide pathways and other pedestrian and bicycle facilities through Development Cost Charges.
- 🚲 *Deeds, donations and dedications.* In many communities, multi-use pathways have been funded in part and in whole by local residents who purchased "deeds" to sections of the pathway. For example, development of a greenway along Mission Creek in Kelowna was partially funded through community donations. Similar to park bench dedication programs, a dedication program can be set up for residents and corporations to donate bicycle facilities, such as bicycle racks or lockers. In many cases, these deeds, donations and dedications are tax-deductible where they are administered by a not-for-profit agency.

- 🚲 *Advertising.* Ads can be located on bicycle racks or on a published bicycle route map to generate revenue to support additional cycling infrastructure initiatives.
- 🚲 *Parking revenues.* A Transportation Demand Management strategy can use pay-parking to generate revenue to support alternative transportation methods as an effective way of reducing vehicle trips.

## **4.4. Monitoring**

Monitoring allows the Town to ensure the goals of the Bicycle Plan are being forwarded. It allows Town staff to determine whether the plan is being implemented effectively, and also allows for the justification of continued expenditures and allocation of funds and resources for bicycle facilities and programs.

Initially, baseline information is collected during the first year of monitoring. Following this, subsequent data can then be measured against this baseline to allow for comparison. After data have been collected and summarized in the first year, it will also be possible to establish targets to be achieved within a specific time period.

Monitoring can be conducted by Town of Ladysmith staff, as part of on-going data collection and management activities. Assistance with data collection could also be provided by volunteers recruited through the existing cycling community.

### **4.4.1. Measures of Success**

In order to clearly and reliably evaluate the success of the Bicycle Plan, the monitoring program should collect data which can be used to calculate the following performance measures:

- 🚲 *Mode share.* Data available from Statistics Canada indicate that the bicycle mode share for work within Ladysmith is 0.3%. A trend increase in the bicycle mode share of all trips and of work trips will be a key indicator of the success of the Bicycle Plan.
- 🚲 *Usage of routes.* Annual bicycle counts at selected locations on the bicycle network will provide a method of annual comparison of bicycle use. A trend of increased numbers of cyclists will be a key indicator of the success of the Bicycle Plan.

### **4.4.2. Data Collection**

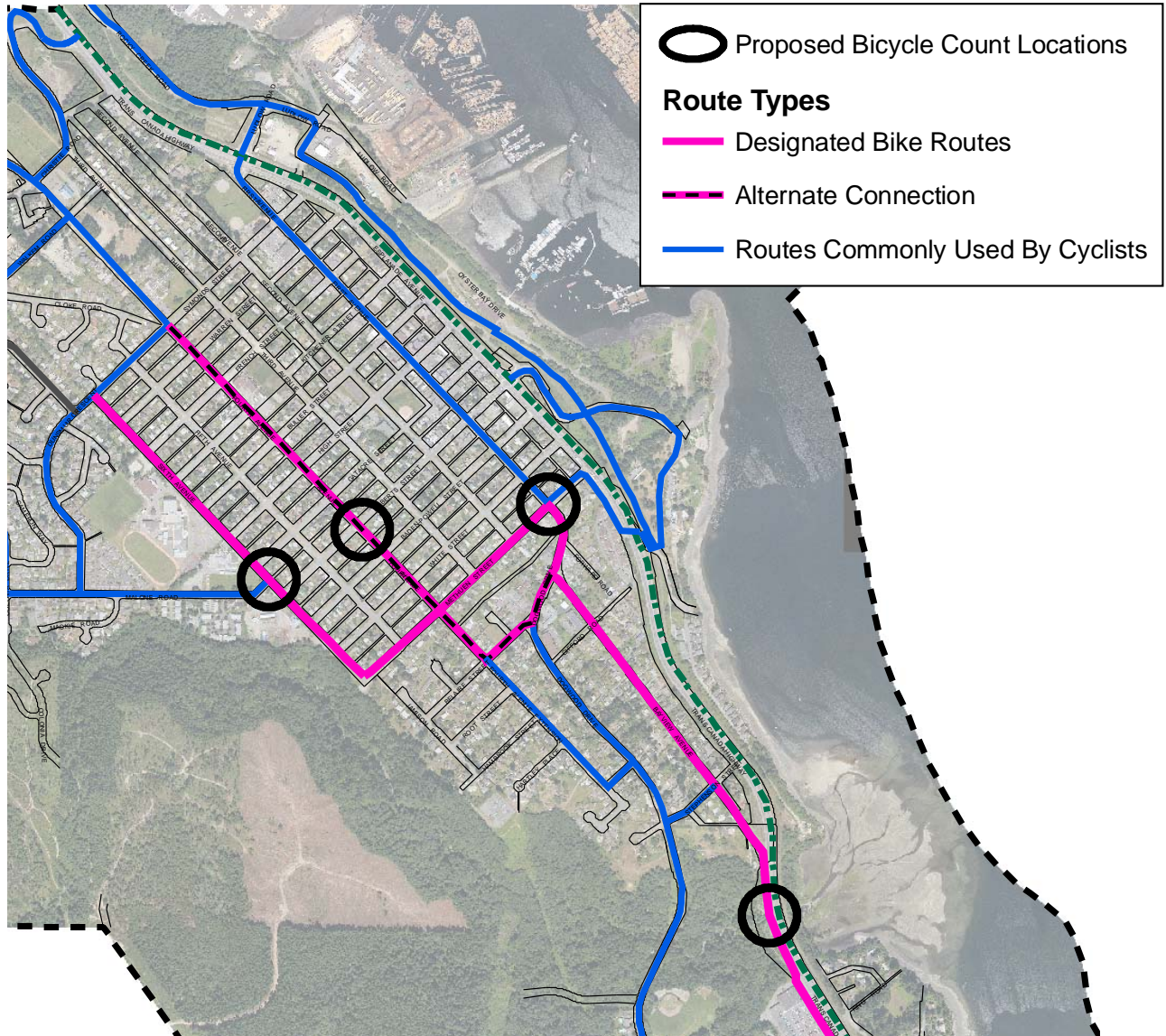
Bicycle counts should be undertaken on a screenline basis so that shifts in bicycle travel to a new or improved route do not skew usage calculations. For consistency, counts should be undertaken at the same locations each year, and at the same times of the year and the same times during the day. A recommended schedule would take counts from 7:30 – 10 a.m.; 11 a.m. – 1 p.m.; and 3 – 6 p.m. The optimum time to undertake counts is in late September/early October (avoiding the Thanksgiving holiday), as schools are in session at this time, and the weather is generally good.

Bicycle counts should be undertaken at 4 locations throughout Ladysmith. Figure 4 illustrates suggested count locations. In addition to bicycle counts, any traffic counts undertaken by the



Town or Ministry of Transportation should record bicycles separately from motor vehicles and pedestrians.

Figure 4 — Bicycle Count Locations

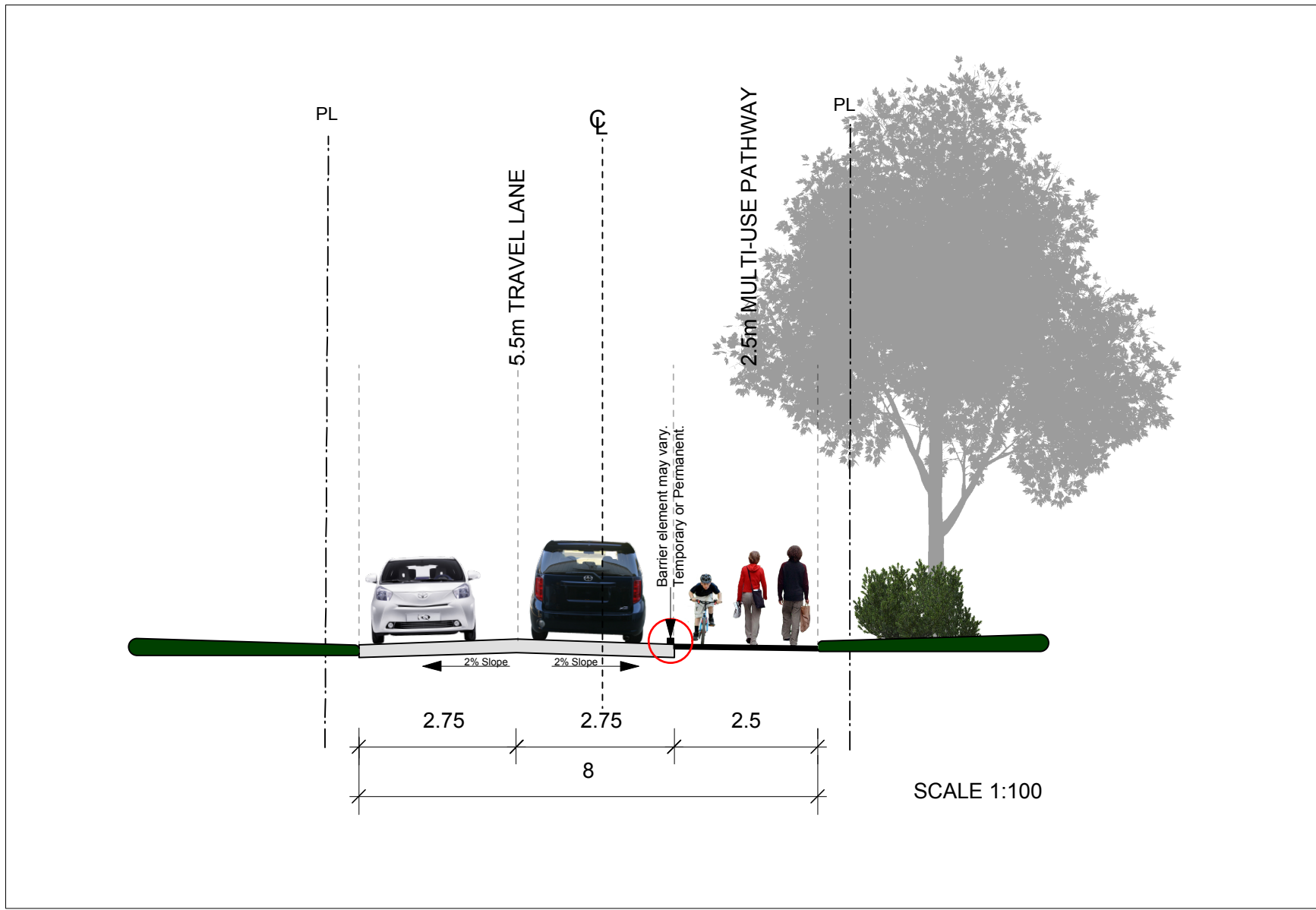


## 5. APPENDIX

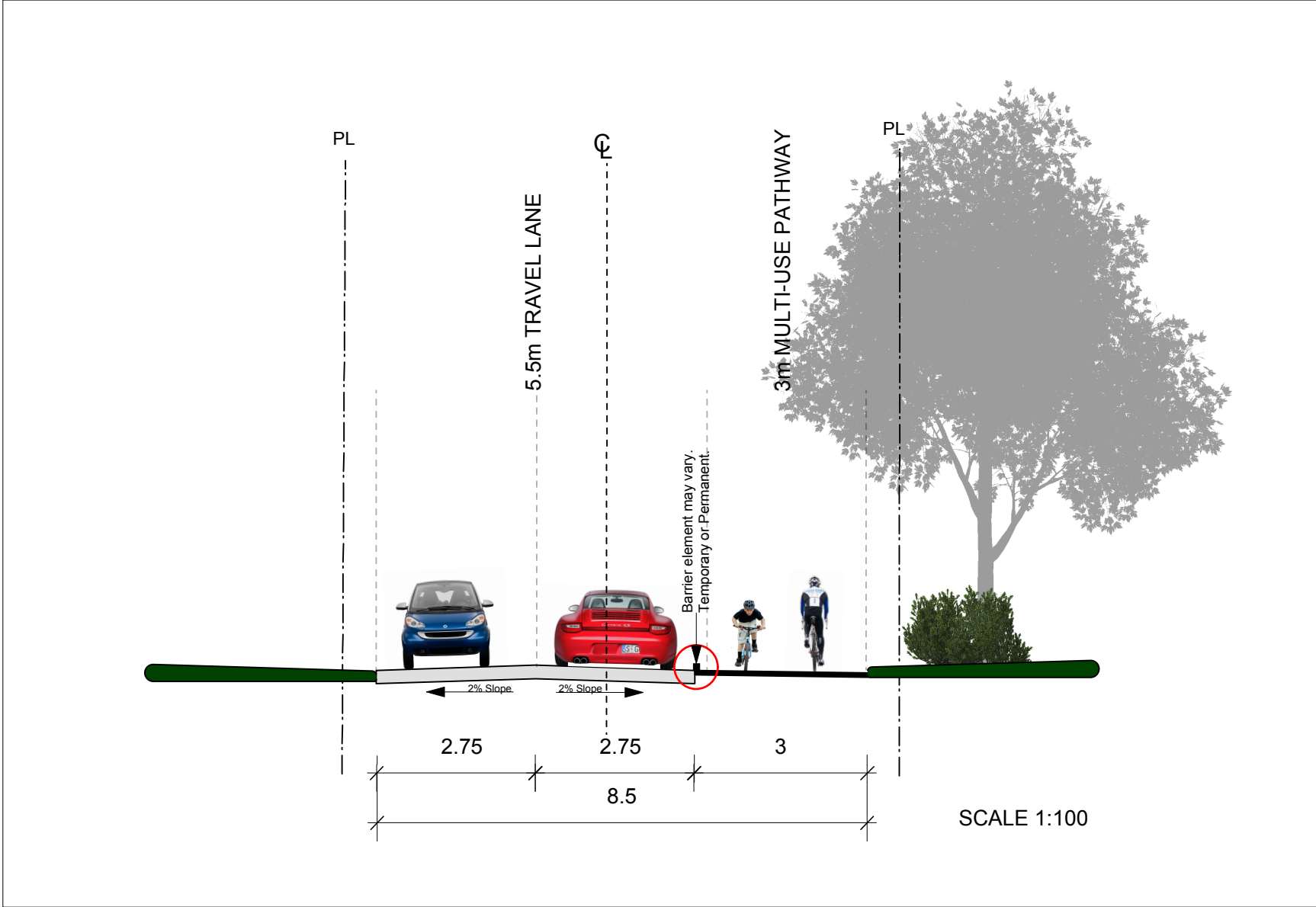
### 5.1. Cross Sections for Engineering Standards

### 5.2. Public Consultation Report with Survey

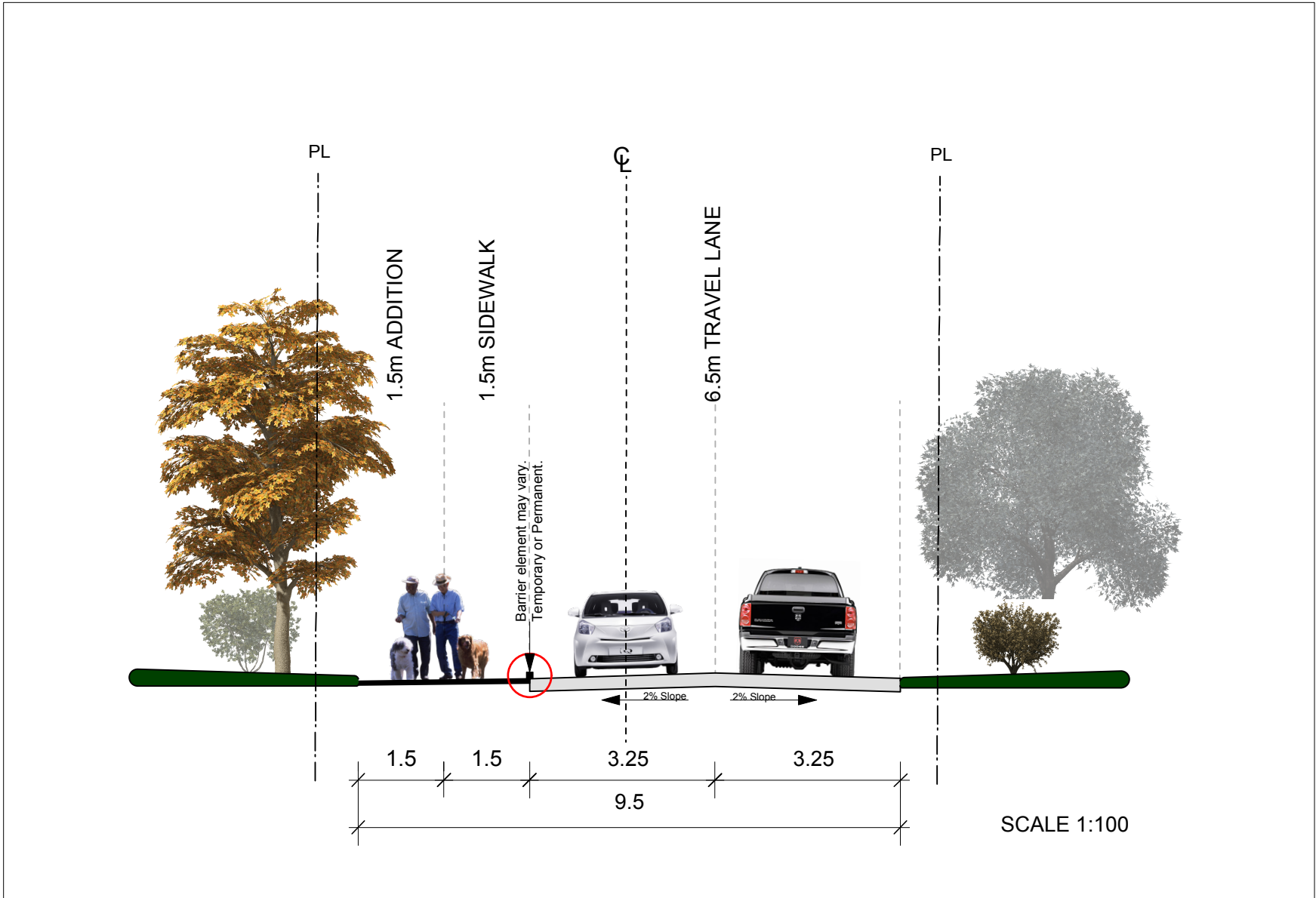




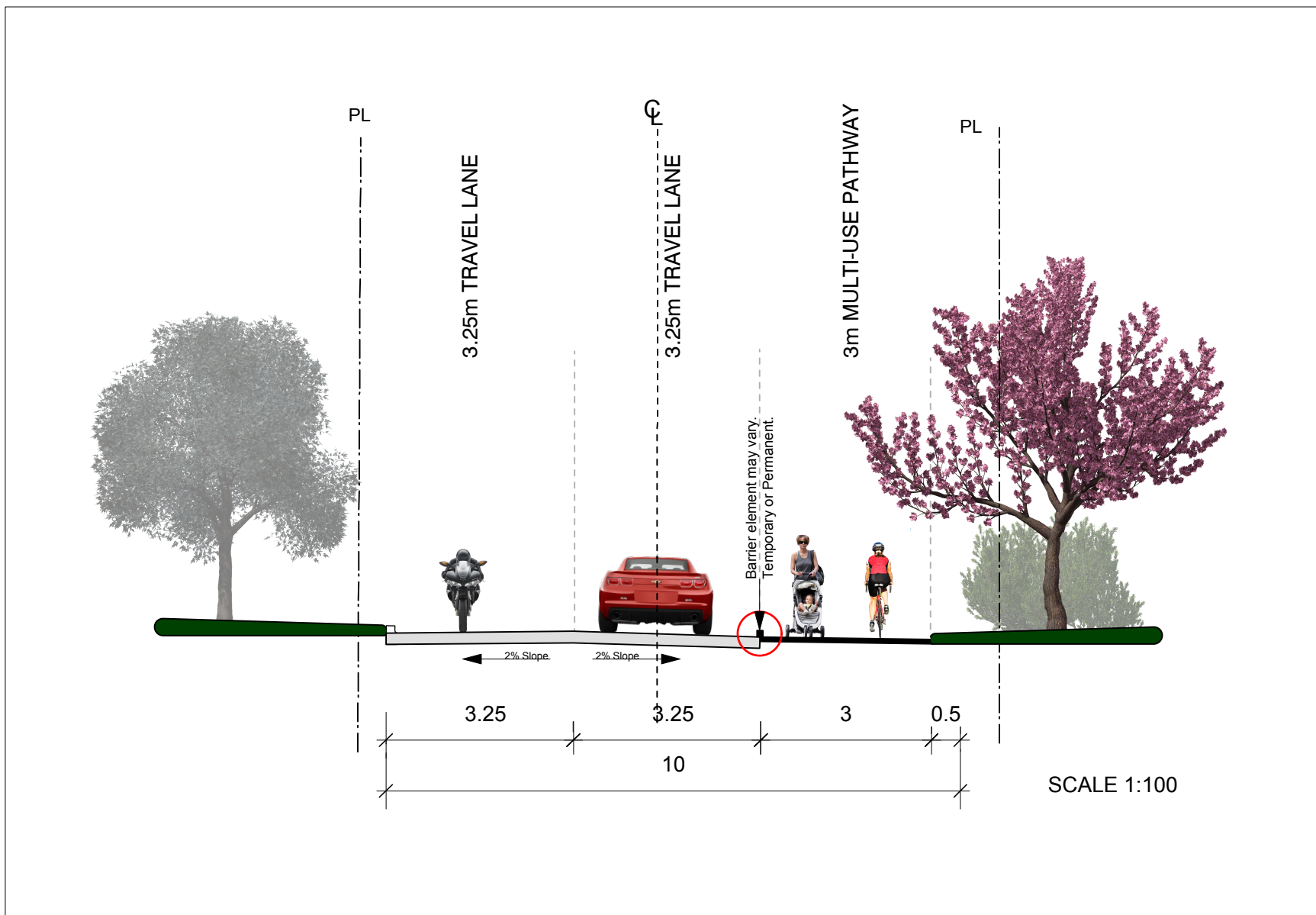
A 2.5m multi-use pathway is suitable for this section only. Existing parameters allows for a 5.5m travel lane. Pathway may be reversed.



A preferred 3m multi-use pathway is suitable for this section. Existing parameters allows for a 5.5m travel lane. Pathway may be reversed.

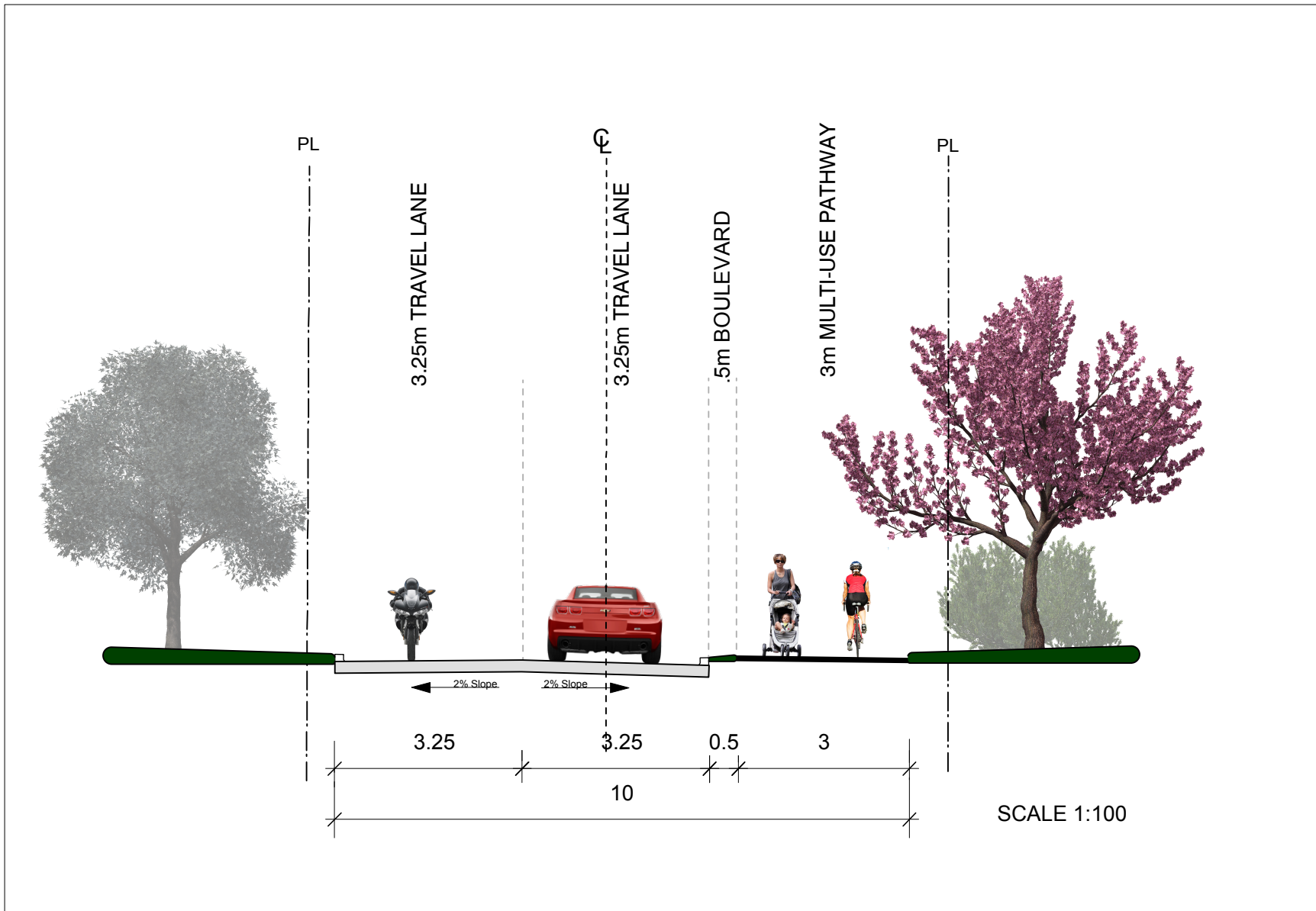


A 3m multi-use pathway developed from an existing 1.5m sidewalk. A 1.5m asphalt addition is an equivalent. Existing parameters allows for a 6.5m travel lane. Pathway may be reversed.



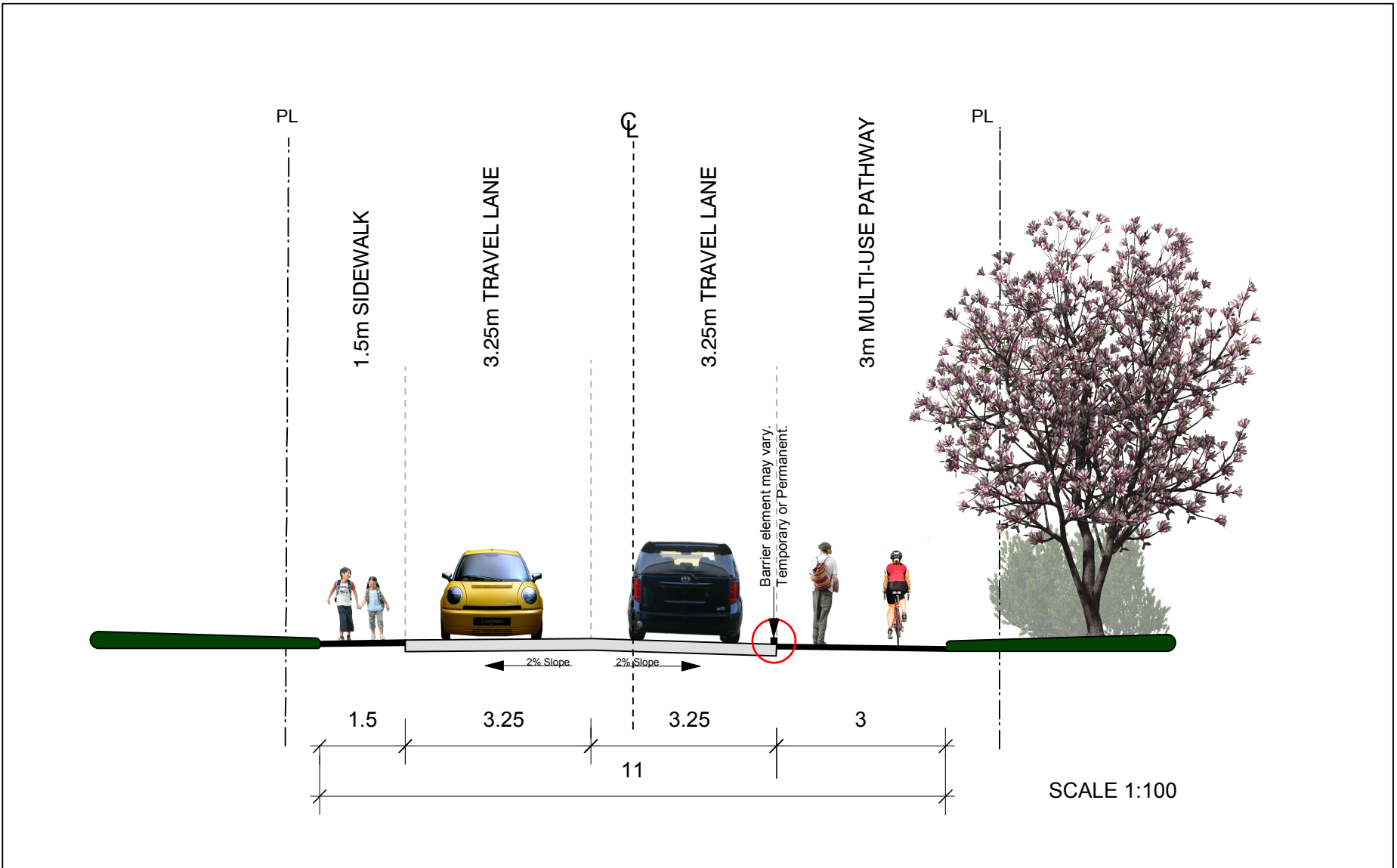
A preferred 3m temporary pathway created from existing roadway is suitable for this section. Existing parameters allows for a 5.5m travel lane. Pathway may be reversed.

10m (Ladysmith, BC)



A preferred 3m permanent multi-use asphalt pathway, elevated from existing roadway. Pathway divided by a curb and .5m boulevard is suitable for this section. Existing parameters allows for a 5.5m travel lane. Pathway may be reversed.

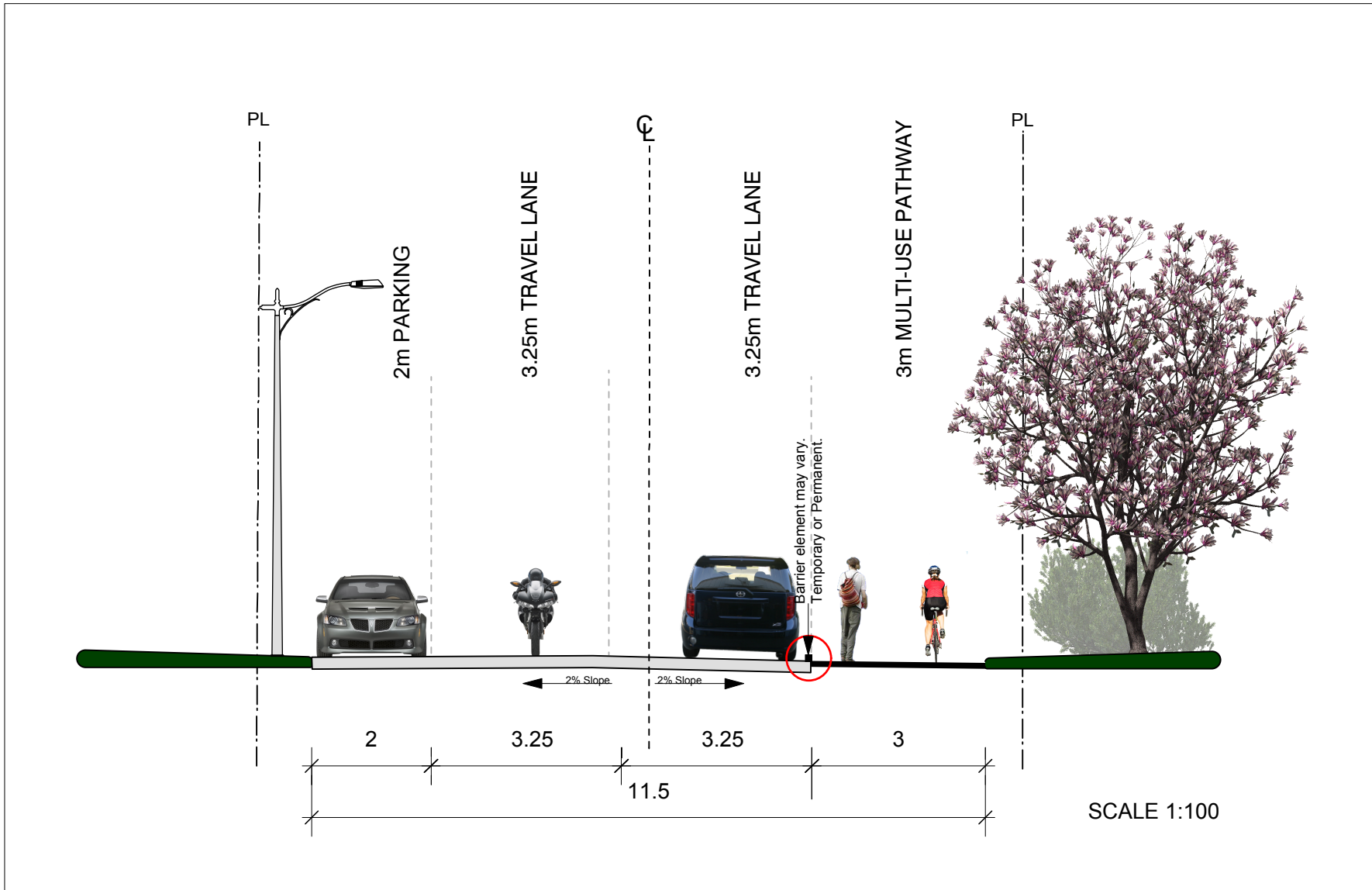
10m (Ladysmith, BC)



A preferred 3m multi-use pathway, divided from roadway with a temporary or permanent barrier.  
 A 1.5m sidewalk on opposite side of pathway.  
 Existing parameters allows for a 6.5m travel lane.  
 Pathway and sidewalk may be reversed.

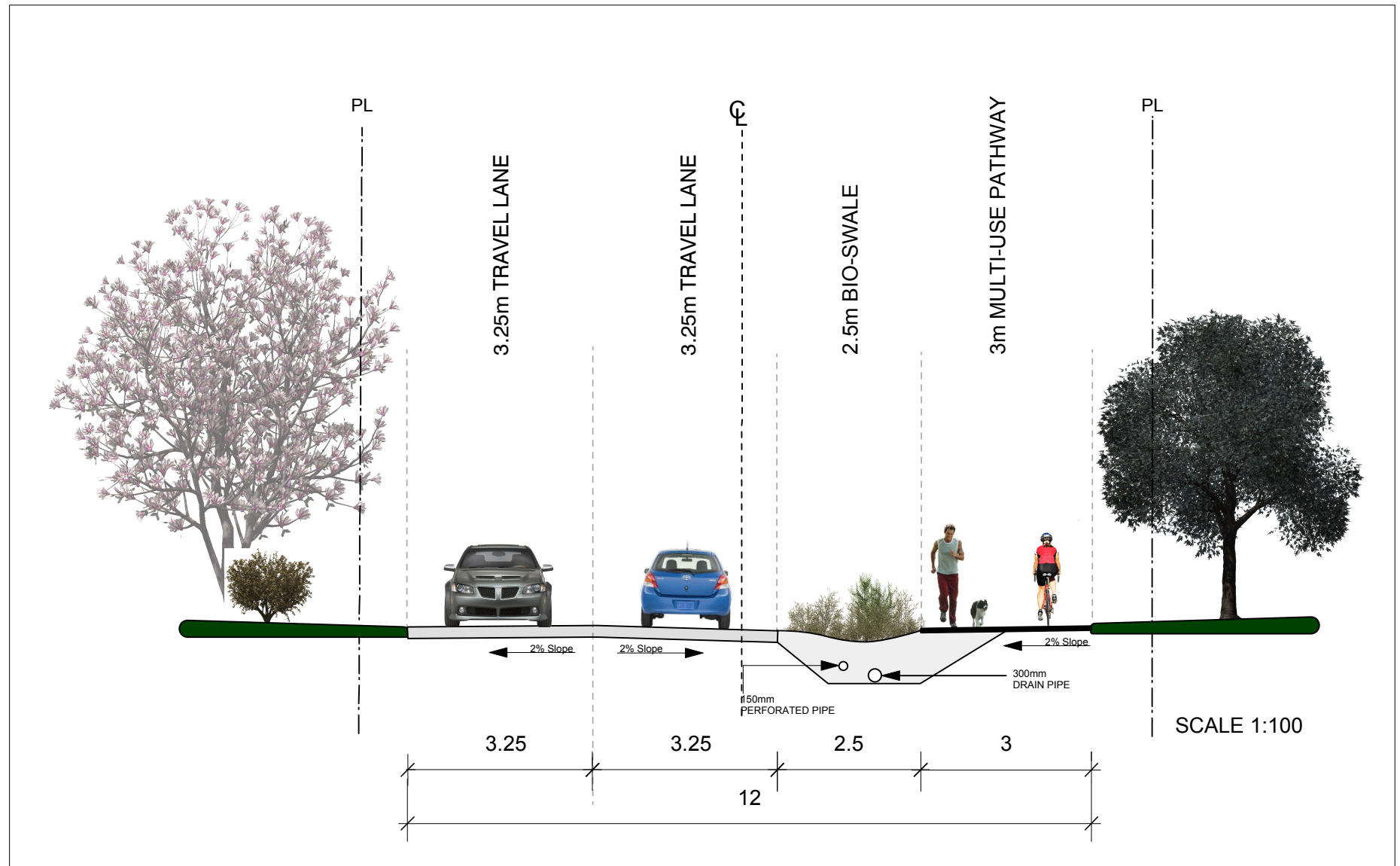
11m (Ladysmith, BC)



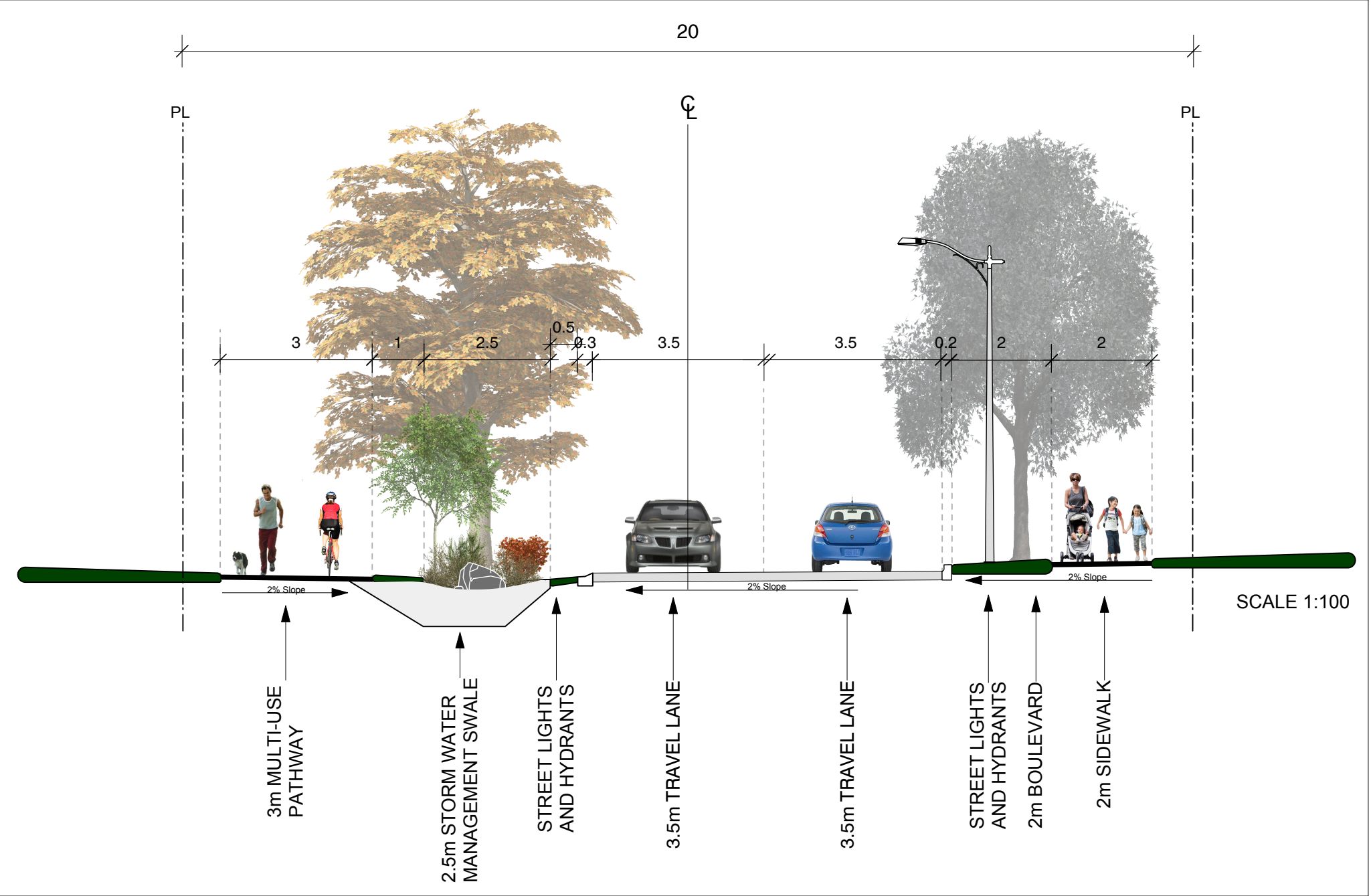


A preferred 3m multi-use pathway is suitable for this section.  
Existing parameters allows for a 6.5m travel lane.  
2m parking option available.  
Pathway may be reversed.

A street light can be added to both sides of the road.



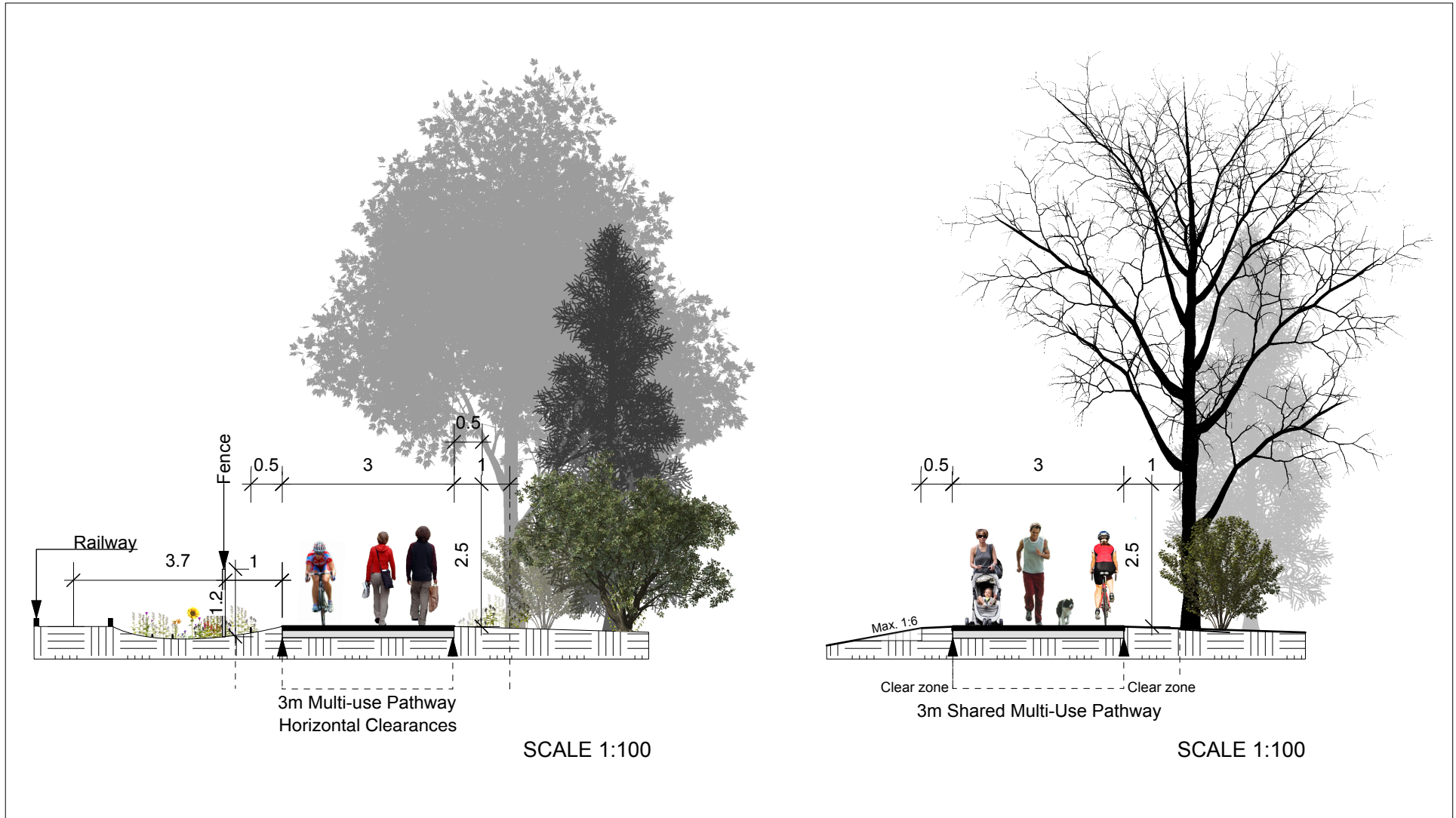
**A preferred 3m multi-use pathway is suitable for this section. Existing parameters allows for a 6.5m travel lane. 2.5m Bio-swale optional. Pathway and Bio-swale may be reversed.**



SCALE 1:100

**UTILITIES:**  
All utility services located underground.  
The Town of Ladysmith will work with utility providers to locate gas and hydro

-Street lights to be placed on opposite side of the street from the multi-use pathway.  
-3m Multi- use pathway and Bio-swale may be reversed.



Min. 3-4m Recreational Pathway (Rails with Trails)  
(Ladysmith, BC)

Min. 3-4m Recreational Pathway (Ladysmith, BC)



## Ladysmith Bicycle Plan Update

### Introduction

There were two main engagement activities for the Ladysmith Bicycle Plan Update process: a school workshop at Ladysmith Secondary School for a grade 10 class of 23 students, and a public event held that evening for the general public (22 attendees). In addition, three community-identified commuter cyclists were interviewed to get their insights and ideas. While an online format was set up at the website [www.bikeladysmith.ca](http://www.bikeladysmith.ca), only one resident used this tool to map their route and identify trouble spots; no online surveys were completed. However, the website had 40 unique visitors to the site. While the total engagement represents only a small portion of Ladysmith's population, and has an acknowledged sampling bias towards existing cyclists (in the case of those attending the public event), the input is still valuable to identify improvements to the network and methods to encourage more cycling more often.

The workshop and public event had a similar format: a brief presentation outlining the project process and initial findings; a survey; a community mapping activity; and a cycling budget priorities "voting" station. These components were all geared towards the following goals:

- Identify travel patterns including origins and destinations of residents
- Identify any problem spots in the existing network
- Generate visual preferences for different facility and route types
- Prioritize spending on cycling-related programs and infrastructure
- Identify existing barriers preventing residents from cycling
- Identify programs to entice residents to cycle more often

### Findings

#### Travel Habits:

Currently, Ladysmith residents primarily rely on their cars to get around. While walking is the second highest transportation mode – a good indication of the pedestrian-friendly nature of the town – cycling is a small portion of the overall travel done in the town (see Figure 1). These percentages are also inflated due to the sampling bias of the survey respondents (as cyclists and as students too young to drive).

While many Ladysmith residents work in another town (e.g. Nanaimo, Duncan), many do their shopping, social activities and use local services in Ladysmith. These types of trips may have the highest potential to switch mode types from vehicle to bicycle, as the travel distances required between Ladysmith facilities are estimated to be less than 2 km.

## Public Consultation

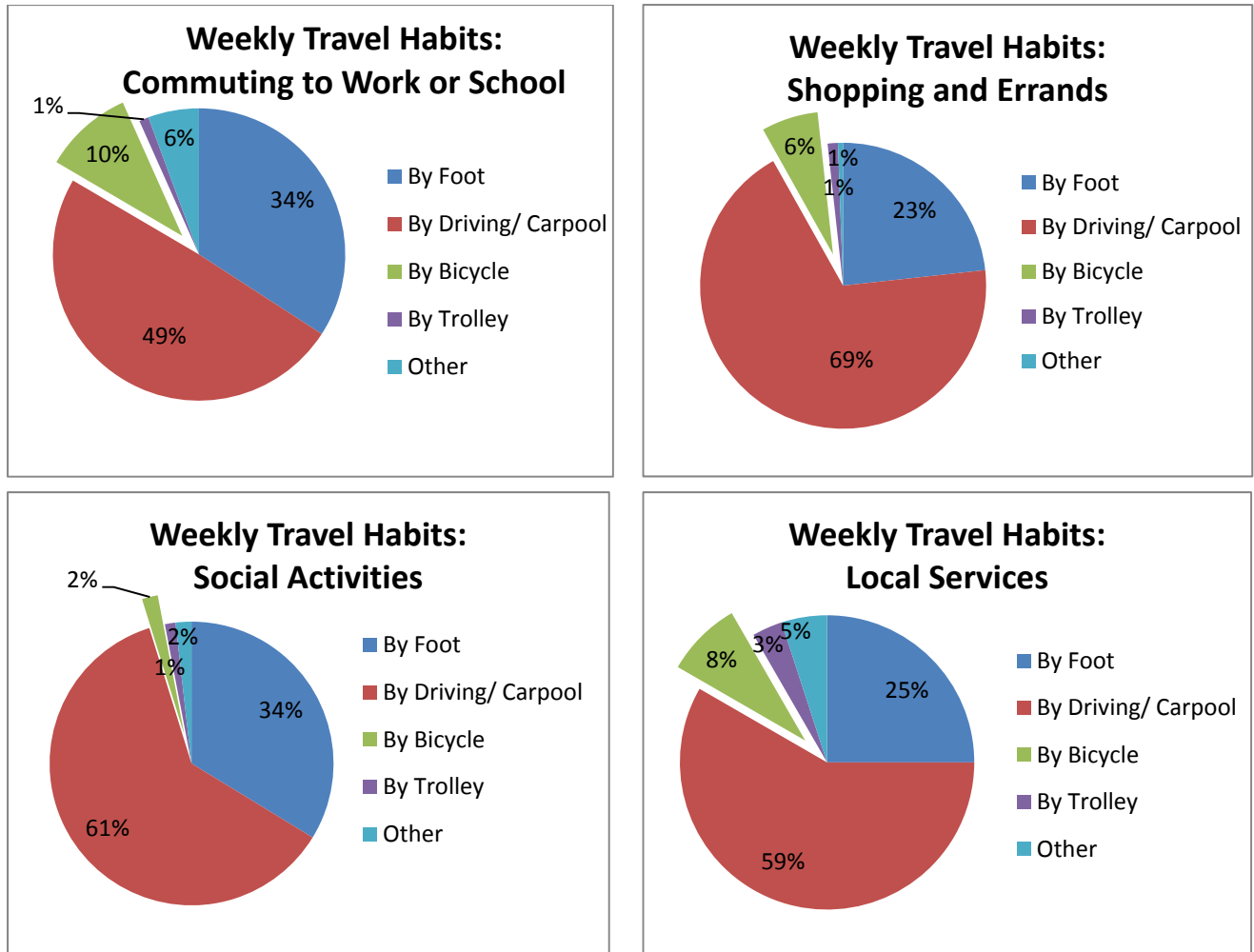


Figure 1: Travel Habits of survey respondents

### Origins and Destinations, Problem Spots:

The map on the following page indicates the most common origins and destinations for Ladysmith residents (Figure 2). The majority of the destinations were expected, including schools, fitness centre, downtown shopping area, Coronation Mall, and recreation areas/parks. The mapping activity did emphasize the regional, out of town connections that are being made on a frequent basis.

Problem spots are also indicated on the map. Common reported problems were:

- Poor road conditions; debris on roads
- Unsafe or busy intersections
- Conflict between users (pedestrians, cars, bikes)
- Parking in bicycle lanes or intersections
- Speed of vehicle travel
- “Stranger Danger” – unsafe area

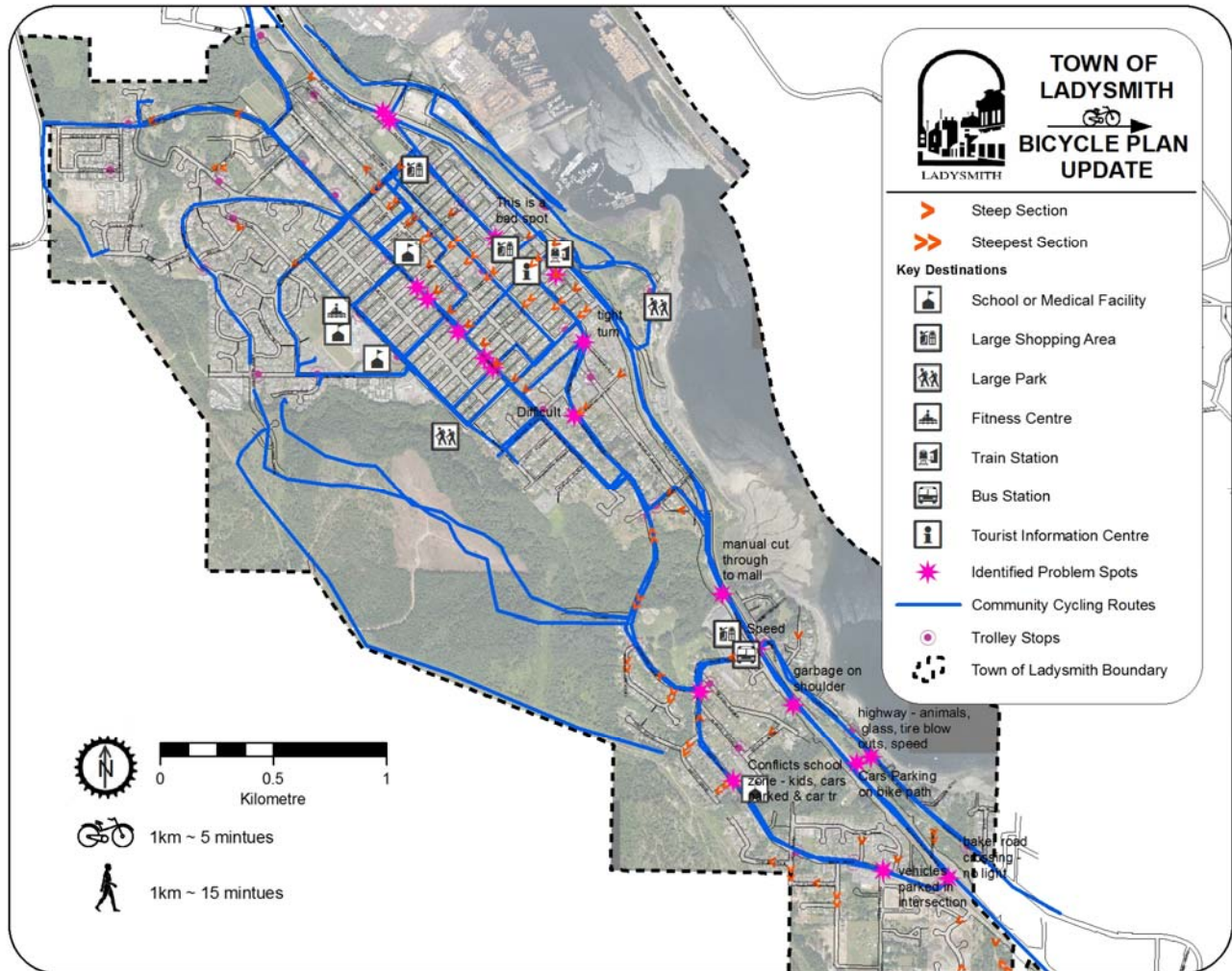


Figure 2 Map of origins, destinations and problem spots

Visual Preferences:

Survey respondents showed preference for separated cycling routes, multi-use pathways, and bike lanes. Shared roadways were not as desirable. This supports existing literature on common preferences for off-street facilities. While utilitarian design bike racks as well as more artistic styles were favoured slightly, there does not seem to be a need for larger capacity, secure bike storage. Sheltered racks were also indicated favourably. Ratings were out of five; average ratings are shown in Figure 3.

In relation to infrastructure and amenities, survey respondents favoured ideas to make their commute more comfortable, with rest stops and amenities such as benches and water fountains along their routes. Cyclist-triggered traffic lights were also popular. Land use planning solutions such as designated bicycle-only streets and shops and services along the route were favourable. (See Figure 4).



Road types



**Cycle Track**  
**4.2**



**Multi-use Pathway**  
**4.0**



**Bike Lane**  
**3.8**



**Shared Roadway**  
**2.6**

Racks



**Bike rack – Large**  
**3.2**



**Bike rack - Utility**  
**3.1**



**Bike rack – Art**  
**3.0**



**Bike shelter**  
**3.0**



**Bike storage lockers**  
**2.6**



**Bike compound**  
**2.6**



**Bike cage**  
**2.5**

Figure 3 Visual preferences for road types and storage facilities

## Amenities, Infrastructure and Planning



**Rest areas**

**3.7**



**Bicycle amenities along route**

**3.7**



**Bicycle dedicated street**

**3.5**



**Cycling push-button signals**

**3.4**



**Shops along routes**

**3.2**



**Bike lift**

**3.2**



**Small scale cycling infrastructure**

**3.1**



**End of ride facilities**

**3.1**

Figure 4 Visual preferences for cycling related amenities, infrastructure, and planning

## Prioritized Spending

Residents were asked to act as “Council for a Day,” and use poker chips to allocate percentages of the Town’s bicycle network budget on what they felt were priorities. Multi-use pathways were by far the top spending choice at the public event, followed by bike lanes and cycle tracks. At the school workshop, students prioritized spending on shared roadway routes, cycle tracks and a “bike lift” running up the hill downtown. (See Figure 5). It should be noted that the accuracy of the student workshop results are somewhat dubious, due to some of the students playing around with the allocation of chips.

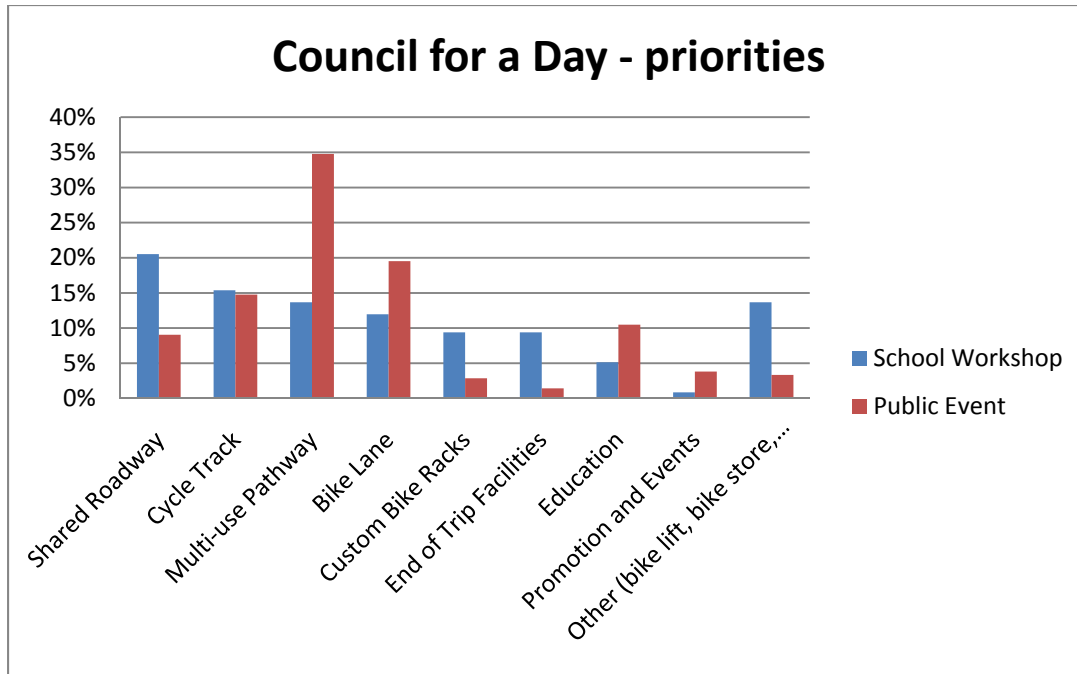


Figure 5 Prioritized cycle budget spending

**Barriers to Cycling**

Identifying conditions that discourage cycling behavior can clarify what improvements are needed. Primary barriers were road conditions, terrain, safety and security issues, and weather (see Figure 6). While some of these items (such as weather conditions and topography) are beyond our control, others can be improved using policy tools and infrastructure improvements.

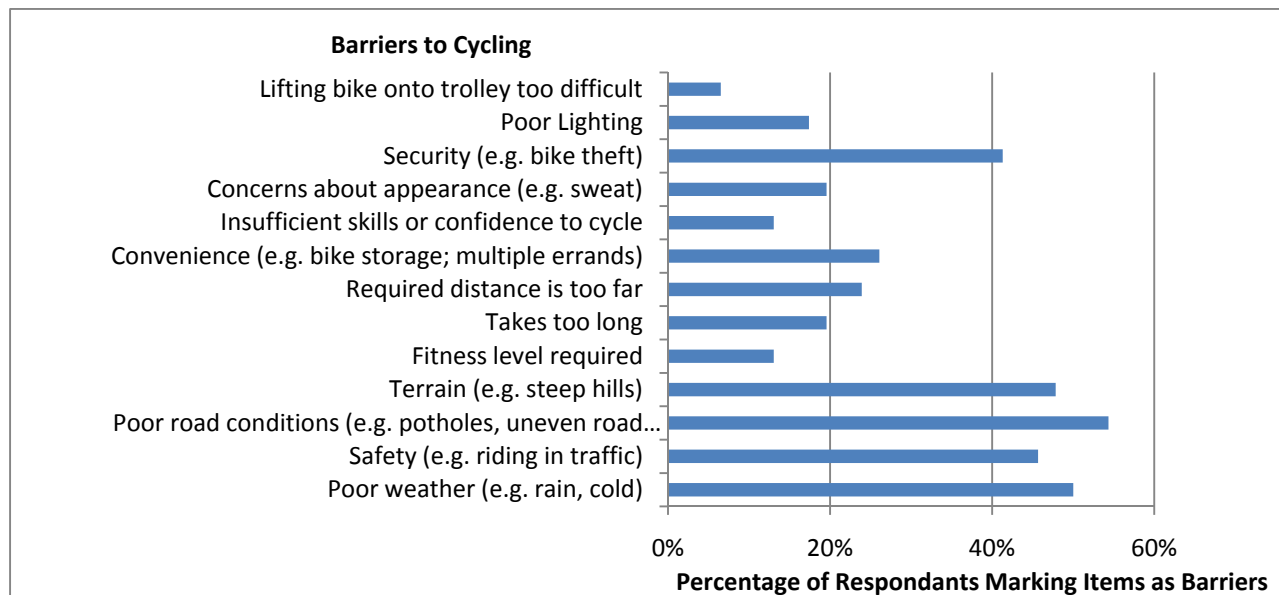


Figure 6 Barriers to Cycling

## Encouragement of Cycling

Residents were asked what programs and policies would encourage them to cycle more often. Slow traffic speeds, bike maintenance training and access to tools, and a commuter skills course were top picks (see Figure 7). Other ideas were given as notes and suggestions written on a large sheet of paper in answer to the question “What would be the best thing to make riding a bike more fun (and safer) in Ladysmith?” Many of the comments reflected opinions found in the survey, but various new ideas were also given: bicycle clubs, regional cycling trail connections, bike shop, and better signage. A complete list can be seen in Figure 8.

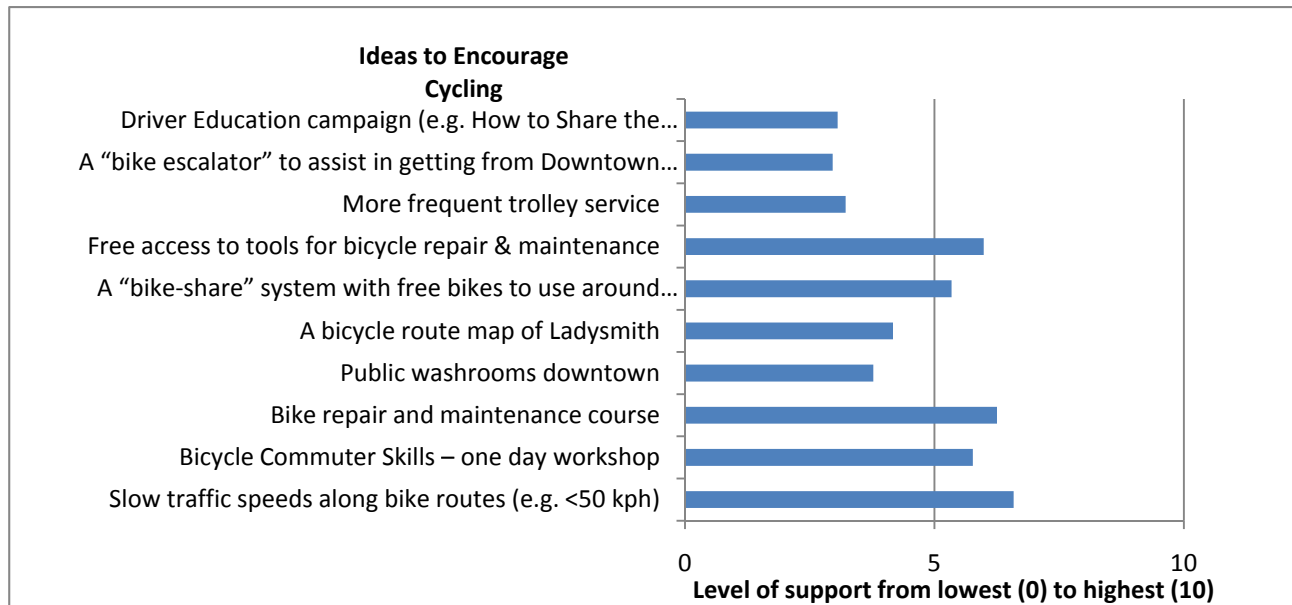


Figure 7 Ideas to Encourage Cycling

Q. What would be the best thing to make riding a bike more fun (and safer) in Ladysmith?

- Escalators on Symonds
- Tow rope on every steep hill!
- Easy path from out of town – extended parkway out of Ladysmith
- Bike clubs
- More paved trails / smooth side paths
- More water fountains that work
- Main bike route on Dogwood
- Bike trail all through Ladysmith
- Another tunnel
- A bike lift for big hills like Symonds St.
- More trails everywhere
- A bike shop in Ladysmith
- More bike lanes
- Bike stops (with washrooms, showers, racks...)
- Commuter routes to Nanaimo and Duncan
- Commuter route all the way to Chemainus/Nanaimo
- Bike store/ cycling coalition / advocacy
- Safety
- Rain: covered storage
- Bike clubs
- Vancouver Island Cycle Touring
- Use the railway (paved or properly surfaced trail, such as Lochside Trail)
- More bike lanes on roads (dedicated lanes)

- Connecting neighbourhoods / communities
- Engineering (curbs on Saltaire are too high and steep at intersection)
- Broken road edges on 4<sup>th</sup> Ave (and other roads)
- Better signage for bike routes
- Alternate / dedicated routes not only within town but friendly connections to Chemainus, Duncan, Cedar, Nanaimo
- Sea-side bike path route connecting from Nanaimo to Chemainus

Figure 8 Ideas to make cycling safer and more fun

### Cyclist Interviews

Interviews with three commuter cyclists were conducted to get a more in-depth perspective on issues, and highlights of cycling in Ladysmith. A summary of these comments is shown below (Figure 9).

#### Issues:

- 1<sup>st</sup> Ave from High St until Baden-Powell (especially Roberts to Baden) is very congested
- 4<sup>th</sup> Ave is a good route, but needs road upgrades
- Lots of traffic on all cross-streets to 5<sup>th</sup> Ave, so cyclists need to stop at all stop signs. Stops momentum. Not a good route for crossing town
- Symonds is a VERY steep hill, but this is the designated bike route?!
- During winter, most streets are salted except Symonds and High St. (Check with Engineering)
- Bayview access to highway is a little tricky
- No bicycle repair or supply shops in town – forced to drive to Nanaimo or Duncan
- People backing out of parking on 1<sup>st</sup> Ave don't look behind them
- Winter has very frosty roads, especially in the morning. Salting of bike routes is very important
- Very little signage indicating bike routes, etc.
- Most critical intersection is 1<sup>st</sup> and Roberts
- Very few people signal while driving: "small town feel"
- Lots of elderly drivers, perhaps shouldn't be driving anymore
- Lack of awareness of cyclists by drivers – not used to seeing people on bikes/interacting with them on the streets. Driver Education would be VERY helpful
- Repairs on streets are poorly done (e.g. potholes)
- Formalized cycling groups are in Duncan or Nanaimo rather than local
- People with young families – find it hard to schedule transportation with kids
- No public washroom downtown
- Dogwood Dip – very few lights at night

#### Opportunities:

- Usually about 15 – 20 kids bike to elementary school. A few teachers (e.g. Terry Boyle) also ride
- Bel Aire is the best for going uphill (even better is alley way between Bel Aire and Methuen – goes from 1<sup>st</sup> to 4<sup>th</sup>, quite a reasonable grade)
- Would be great to get from the Marina to town, perhaps a route connecting the tunnel, Transfer Beach, and Marina on water side of the highway

- Gravel roads on water side of highway near Transfer Beach, to Symonds side of town – could be a great opportunity.
- Bayview is close to presenting an option to the Dogwood Dip, just needs better connectivity
- Can offer programs through the Rec centre
- Small group of mountain bikers (mainly through high school)
- Highway shoulders are pretty good (though scary in merge and turn lanes)
- Rec centre, schools have showers and change rooms
- Rail Trail would be a great opportunity
- Transfer Beach is awesome community amenity during the summer – tie cycling network to this
- Overall, pretty safe community. Bike theft isn't a huge issue

### Conclusion

While improvements and additions to the road network are important to encourage Ladysmith residents to cycle more often and will be addressed by the Bicycle Network Plan update, smaller scale, less expensive options also exist to improve the cycling experience. These can include a more comprehensive signage and way-finding system, workshops on commuter skills and bike maintenance, a driver education campaign, and supportive programs and events such as cycling clubs and organized bike rides.



## Bicycle Plan Survey

This survey will take about 10 minutes to complete. The goal of the Ladysmith Bicycle Plan Update is to improve the bicycle routes, facilities and programs to make it easier for you to choose your bicycle over your car. Please answer these questions so the Town of Ladysmith is aware of areas you believe are the most important in creating our Bicycle Plan.

\*By completing this survey (either in hard copy today, or online at [www.bikeladysmith.ca](http://www.bikeladysmith.ca) by Nov.12, 2009) you will be entered in a draw to win great prizes! \*

Name: \_\_\_\_\_

Contact info (phone or email): \_\_\_\_\_

### Transportation Habits:

1a. How many people are in your household?

b. How many bicycles are in your household (if any)?

c. How many cars (if any)?

2a. Do you work and/or go to school in Ladysmith? Y or N

b. Do you primarily do your shopping and other errands in Ladysmith? Y or N

c. Do most of your social and recreational activities occur in Ladysmith? Y or N

3. **How many times a week** on average do you travel – count each trip direction separately (home to work = 1 trip, work to home = another trip)

	By Foot	By Driving/ Carpool	By Bicycle	By Trolley	Other
To commute to work or school?					
To do errands or shopping?					
To get to a social activity (e.g. friend's house, community event)?					
To get to local services (e.g. doctor's office, haircut, etc)?					
For other reasons?					



### Visual Preference:

4. For each of the following photos, please indicate how much the item would appeal to you as a cyclist or a potential cyclist on a scale of 1 to 5 (1 = least appealing; 5 = most appealing).

#### Route Types



**Shared Roadway**

- Designated by signs as open to bicycle travel.
- Shared with other vehicle traffic.
- Usually doesn't have pavement markings.

1      2      3      4      5

Don't Like —————> Like



**Multi-use Pathway**

- Path shared by many types of non-vehicular users (bikes, pedestrians, in-line skates).
- Located away from a road.

1      2      3      4      5

Don't Like —————> Like



**Bike Lane**

- Portion of road designated exclusively for bicycles.
- Identified by signs and/or pavement marking.

1      2      3      4      5

Don't Like —————> Like



**Cycle Track**

- Path assigned to cyclists. 1 way or 2 way travel.
- Physically separated by barrier or open space.

1      2      3      4      5

Don't Like —————> Like





### Bike racks and storage opportunities



#### Bike rack

- Utilitarian design.
- Fits into most types of places.
- Good for single or double bike parking only.

1      2      3      4      5



#### Bike rack

- Public art emphasis.
- Custom design allows for almost any shape.

1      2      3      4      5



#### Bike rack – large

- Designed for multiple bikes.
- Comes in different sizes.

1      2      3      4      5



#### Bike storage lockers

- Vertical bike storage + room for gear.
- High security factor.

1      2      3      4      5



#### Bike shelter

- Weather-protected bicycle parking.
- User-orientated info, eg. Bike map.
- Easy access to streets and adjacent buildings.

1      2      3      4      5



#### Bike storage – high volume

- Limits access to known users.
- Can be installed in parking lots/apartments or other buildings.

1      2      3      4      5



**Bike compound**

- Highly functional bike locker, showers, change room and storage.
- Weather – protected storage; secure.

1      2      3      4      5



**On Street bike racks**

- Street access parking opportunities to keep sidewalks open and free for pedestrians.

1      2      3      4      5

**Slope assistance ideas**



**Bicycle lift**

- Similar to a ski lift, drive train and foot peg move you up a hill while on your bike.
- Expensive to install.

1      2      3      4      5



**Bicycle dedicated street**

- Pedestrian and bicycle dedicated street.
- Allows for slower speeds without auto traffic frustrations.

1      2      3      4      5



**Bicycle stops along routes**

- Attractive destinations along routes with slopes, eg. cafe, food store, neighborhood convenience store, bike shops, etc.

1      2      3      4      5



**Bicycle and pedestrian rest areas**

- Pocket parks and rest areas along routes.
- Possible public washroom facilities.

1      2      3      4      5



## Bicycle amenities/infrastructure



### Bicycle amenities along route

- Small public amenities along route eg. drinking fountain, bench.

1      2      3      4      5



### Cycling push-button signals

- Road crossing push-button lighting system for convenience while cycling.

1      2      3      4      5



### Small scale cycling infrastructure

- Bicycle ramp on stairs.
- Cycling orientated signage.

1      2      3      4      5



### End of ride facilities

- Storage lockers, and/or shower facilities at place of work/school.

1      2      3      4      5

## Programs:

5. Please rank the following ideas for their ability to encourage you to try cycling more often. Assign one rank per item (e.g. 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, etc.). NOTE: list continued on next page.

	Rank
Slow traffic speeds along bike routes (e.g. <50 kph)	
Bicycle Commuter Skills – one day workshop	
Bike repair and maintenance course	
Free access to tools for bicycle repair & maintenance	
A “bike-share” system with free bikes to use around town	



A bicycle route map of Ladysmith	
More frequent trolley service	
Driver Education campaign (e.g. How to Share the Road)	
Public washrooms downtown	
A “bike escalator” to assist in getting from Downtown to 4 <sup>th</sup> or 6 <sup>th</sup> Ave	

If you have additional ideas for programs or other support, please suggest them here:

### Barriers to Cycling:

6. Which of the following items is a barrier to you cycling? Mark all that apply. If there are additional barriers, please add them to the list.

Poor weather (e.g. rain, cold)	
Terrain (e.g. steep hills)	
Fitness level required	
Takes too long	
Required distance is too far	
Convenience (e.g. bike storage; multiple errands)	
Insufficient skills or confidence to cycle	
Concerns about appearance (e.g. sweat)	
Perceived social norms	
Security (e.g. bike theft)	
Safety (e.g. riding in traffic)	
Lifting bike onto trolley is too difficult	
Poor street lighting	
Poor road conditions (e.g. potholes, uneven road surfaces)	

Other comments or suggestions?

Thank you for responding to the Bicycle Plan Survey!