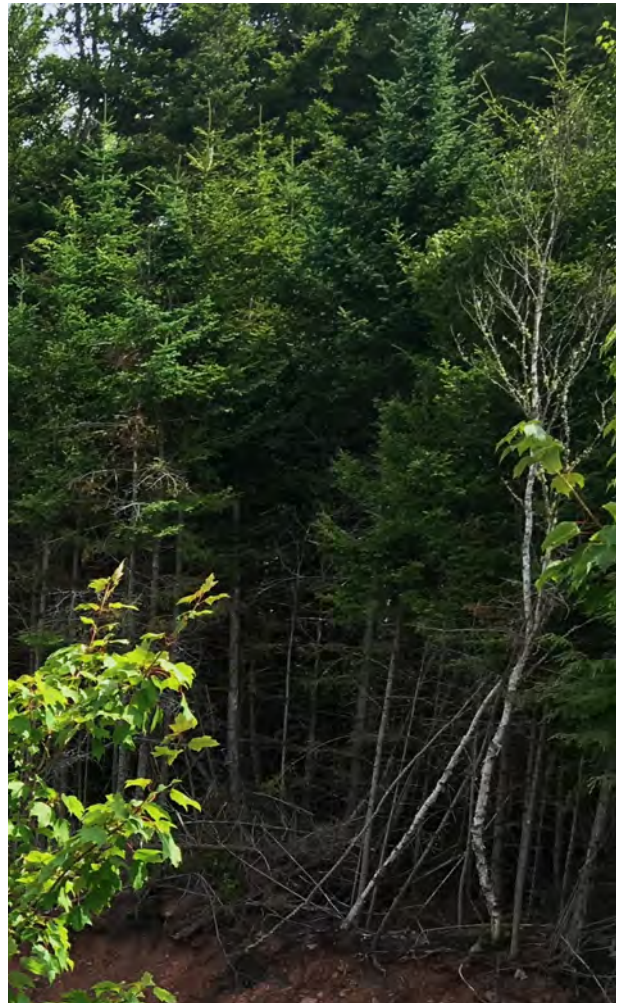




**FINAL REPORT**



TOWN  
OF TRURO, NS

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**RAILYARD MOUNTAIN  
BIKE PARK | STRATEGY  
AND MASTER PLAN**

NOVEMBER 22<sup>ND</sup> 2019 | PROJECT 9281914

**Nova**



**THE STRENGTH OF  
A COLLECTIVE FOR  
INNOVATIVE AND  
SUSTAINABLE  
RECREATION  
AND TOURISM**



01	2019-10-23	DRAFT REPORT
02	2019-11-21	FINAL DRAFT REPORT
03	2019-11-22	FINAL REPORT
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# INTRODUCTION

The Railyard Mountain Bike Park, located in the southwestern section of Victoria Park in Truro, has grown into an extensive mountain biking network. It offers terrain for riders of all ages and abilities with a wide variety of trails and skills parks. It appeals to both local riders and tourists.

In 2017, a small working committee was tasked to further build the network and to brand the site as a Mountain Bike Park. The work of the committee appears to be a success: the brand is now gaining traction beyond Truro, and it attracts more and more riders from all over Atlantic Canada.

The Town of Truro recognizes this as a development opportunity for the town: becoming a mountain biking destination. In order to grasp this opportunity, the Town of Truro needs to present a clear plan, borne out of community consensus, which details a roadmap for the sustainable development of the Railyard Mountain Bike Park over the next 7 to 10 years.

This Master Plan envisioned by the Town of Truro needs to comply with its objectives: a sustainable and balanced approach to tourism, local development and community wellness. This plan results from a careful balancing act between making the most out of the opportunities for tourism and maximizing the economic impact for the community, while preserving the benefits of Victoria Park as an urban green space for all.

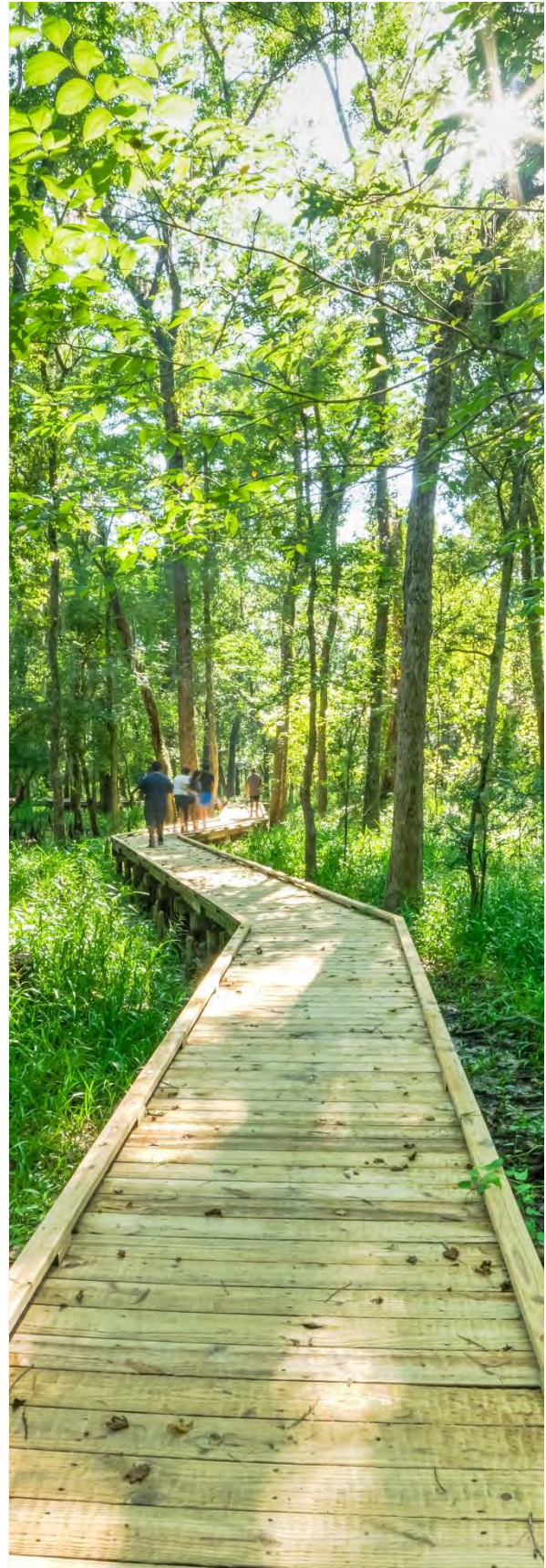
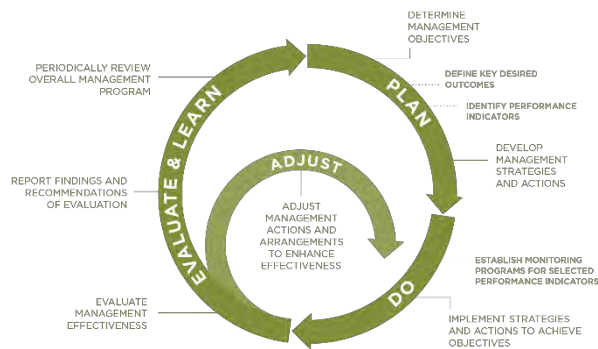
This Master Plan is based on the following vision for the Railyard Mountain Bike Park in Truro:

The Railyard Mountain Bike Park is a must-stop experience in Nova Scotia and in Atlantic Canada. Built and designed by and for the community, it appeals to both local residents and visitors. It is a fun and safe place for all members of the family, whatever their age or ability.

# 1 METHODOLOGY

The Railyard Mountain Bike Park Master Planning Document was prepared and designed to allow for adaptive management. This philosophy has proven successful in the planning of management and operations in other community sites and parks, and facilitates the involvement of the local community. It is based on the principle of learning and continued improvement in development projects.

Figure 1 Cycle of adaptive management



### Step 1 – Workshop with the Steering Committee

A short review of documentation and a summary background review were carried out in order to provide material for discussion. A workshop (August, 7<sup>th</sup> 2019) was then organized with the Project Steering Committee to identify the key issues and challenges for the Mountain Bike Park, discuss recent development initiatives and their success or failure, and identify potential partnerships. A site visit was also organized with some members of the Project Steering Committee.



Workshop with the Steering Committee

### Step 2 – Literature review and interviews

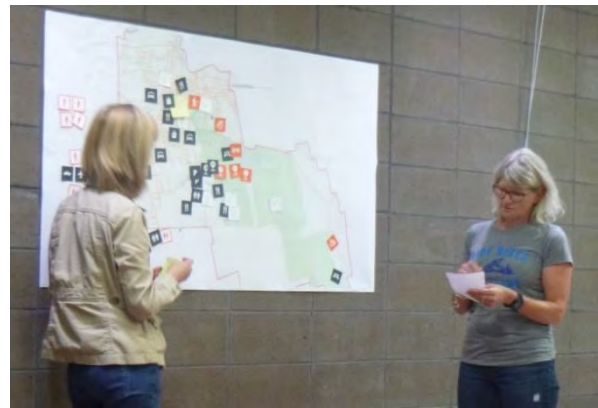
Following the first workshop, a review of current trends in mountain bike outdoor activities and tourism in Nova Scotia was carried out. Some key stakeholders from those different areas were also interviewed in order to better understand the potential partnership opportunities and potential funding programs.

### Step 3 – Community meeting

Reaching out to the community (mountain bikers and users from different backgrounds) was a priority in order to allow users to take part in the planning process (specific user groups, neighbouring residents and businesses, etc.).

The community meeting (September, 16<sup>th</sup> 2019) included:

- ▶ “Today’s Weather in Truro”: an activity aimed at elaborating a portrait of what the participants liked, disliked and would like to see improved in the Railyard Mountain Bike Park;
- ▶ “A walk in the Park in 2040”: a projection of the participants’ vision;
- ▶ “We all like a good challenge”: a prioritization of issues and challenges
- ▶ A final activity to discuss solutions.



“Today’s Weather in Truro” and “A walk in the Park in 2040” activities during the community meeting

### Step 4 – SWOT analysis

The data gathered through the workshop, the community meeting and the literature review was completed by:

- ▶ An in-depth site assessment, in order to retrieve all relevant information related to the current conditions and local context of the Railyard Mountain Bike Park (trail conditions,

signage and infrastructure, existing users and groups, retailers and other partners).

- ▶ A strategic positioning analysis of the Railyard Mountain Bike Park to survey and analyze the relevant data regarding the broader context in which this project is evolving: local, regional and national competitors, best practices and case studies, current trends in outdoor events and mountain biking tourism, government and industry growth strategy, available funding programs and partners and their requirements, economic opportunities for the community.

Based on the Site Assessment and the Strategic Positioning, the overall Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for the Railyard Mountain Bike Park was completed.

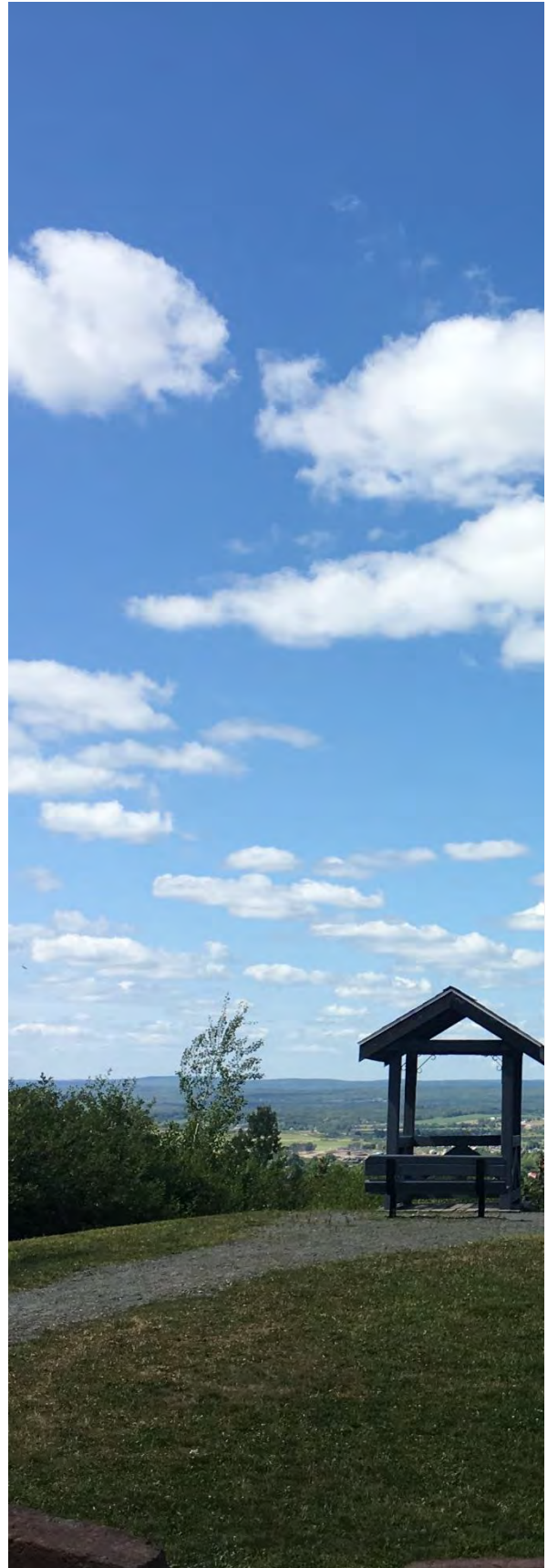
#### **Step 5 – Vision, recommendations and action plan**

A major part of the work on the vision, the goals and the objectives for the Railyard Mountain Bike Park development was done in the workshop and during the consultation process. This work was structured and aligned with the SWOT analysis. This ensures that the vision, the goals and objectives are in line with the key challenges, and that the Action Plan is able to address them effectively. The Action Plan defines the strategies and actions necessary to achieve the goals and objectives. It is structured around short-, medium-, and long-term timelines.

## 2 PLANNING CONTEXT

The Railyard Mountain Bike Park Master Plan is part of a broader planning strategy in the Town of Truro and Colchester County.

This section presents the key contextual elements for understanding the planning process. Appendix 1 includes the main planning documents, including relevant issues to consider in the Master Planning preparation.



## 2.1 TOWN OF TRURO

Truro is the shire town of Colchester County and is located on the south side of the Salmon River floodplain, close to the river's mouth at the eastern end of Cobequid Bay. Truro lies at the junction of the Canadian National Railway, running between Halifax and Montreal, and the Cape Breton and Central Nova Scotia Railway, running between Truro and Sydney.

The Town is also located at the junction of Highway 102 (Veterans Memorial Highway) and Trans-Canada Highway 104. These two routes convey traffic from all over Nova Scotia and Newfoundland and provide the primary connection between these areas and the rest of the continent. It is not surprising, then, that Truro has become widely known as the Hub of Nova Scotia.

The Town of Truro is the urban centre of Colchester County and it functions as a regional destination for shopping, business, health care, industry, distribution and culture. The amount of high-density multi-residential development and the variety of housing types in the central area are characteristic of larger urban centres, rather than a small town such as Truro.

## 2.2 VICTORIA PARK

### Location

The Park is located in the heart of the Town of Truro, bounded by Young Street to the west, Brunswick Street to the north, and Burnyeat Street to the east. The main entrance to the Park is located on Brunswick Street and Park Road and, despite being situated only a few hundred metres away from the Downtown core, it is separated from it by a wide rail corridor, creating a physical and perceived barrier between the two areas.

The Park is approximately a one-hour drive (or 100 kilometres) from downtown Halifax, only ten

minutes from Highway 102 and about fifteen minutes from Highway 104.

### History

Victoria Park has been widely considered one of the premier municipal parks in Atlantic Canada since its official opening on July 5, 1888. It boasts a dramatic steep-sided gorge, ancient river channels carved into 360-million-year-old geologic formations, beautiful cascading waterfalls and a stately old-growth forest containing 250-year-old Eastern Hemlocks. It was the desire to protect these unique natural features that led to the creation of Victoria Park in 1887. In 2017, Truro Town Council designated Town-owned lands within the watershed boundary to be added to Victoria Park, thus expanding the park from 400 acres (160 hectares) to nearly 3,000 (1,200 hectares).

### Description

Victoria Park is a natural woodland park located in the centre of town. The Park's natural beauty and its many amenities, including the area's only outdoor pool, attract many visitors from outside of Truro. The town also features a developing trail system, a number of playing fields, an off-leash park, a skatepark and several other parks. Truro, and Victoria Park in particular, is an important regional destination for outdoor recreation.

The Park's varied topography rises nearly 100 metres from north to south. The highest point of elevation is located along the southern periphery of the Park near a former landfill site, at 120 metres above sea level.

Lepper Brook winds its way from the south-eastern edge of the park, descending over 50 metres to the northern tip. The water has carved a path through the bedrock and created the dramatic features of the park, including two waterfalls, Joseph Howe and Waddell Falls. The brook, which originates upstream of the reservoir, was damned

to create the impoundment. The brook exits the Truro reservoir approximately 70 metres above sea level. Once it leaves the boundaries of the park, Lepper Brook skirts the downtown before emptying into Salmon River just above sea level.

Slopes are very steep along the gorge embankments, ranging from 25% to 80%. Plateaus above the gorge have flatter areas with slopes under 10% and the Lower Park area at the northern entrance is generally flat with slopes less than 4%.

In 1898, the Town of Truro established a water supply reservoir adjacent to Victoria Park. The reservoir is contained by an earthworks dam and feeds into Lepper Brook. It is part of the 1,880-hectare water supply area managed by the Town. Much of this watershed area, including the reservoir, was incorporated into Victoria Park in 2017.

The brook has many important ecological values, supporting a variety of aquatic and riparian flora and fauna. The remainder of the adjoining Town-owned land consists of the former landfill site south of the Park. Excluding sidewalks, there are over 23 kilometres of trails within the Park boundary and an additional 10 kilometres outside the Park in the watershed area.

**Table 1 Building and recreational facilities**

Facility	Description
<b>Victoria Park Pool</b>	Includes a waterslide, a diving board, water cannons and sprinklers, six swimming lanes and some shallow wading pools for young children. Poolside amenities include benches, storage cubbies and two wooden gazebos. Pool and building rebuilt in 2004.
<b>Baseball diamond</b>	The baseball diamond includes the ball field, two concrete block dugouts that are painted brown, a scoreboard and a small wooden stand of bleachers featuring three rows of benches.
<b>Tennis courts</b>	The tennis courts feature six recently repaved courts. The facility is operated by the Truro Tennis Club in cooperation with the Parks and Recreation Department and the Town of Truro.
<b>Kinsmen Club Playground</b>	The playground includes play structures, swings, natural play features and more. The area is divided into a grassy area to the north and a gravel area to the south. The playground area is surrounded by a four-foot high chain link fence to the north and west and the Lepper Brook watercourse to the east.
<b>Splash pad</b>	Near the canteen; includes several in-ground sprinklers and spray equipment. A new splash pad is being developed in 2020.
<b>Canteen and public washroom</b>	The canteen building is a 120 m <sup>2</sup> wooden structure with horizontal and diagonal wooden clapboard cladding.
<b>Maintenance building</b>	A new park maintenance building was constructed in 2019.
<b>Truro Police Service building</b>	The Truro Police Service operates a small 15 m <sup>2</sup> building located near the bandstand.
<b>J. Arch Fraser Band Shell</b>	The band shell is a 100 m <sup>2</sup> concrete structure built in the early 1980s.
<b>Archibald Memorial</b>	In memory of Sir Adam G. Archibald, a small sheltered stone and wood bench was created next to the Band Shell.
<b>Picnic shelter</b>	A large shelter by the main parking lot provides an area for barbequing, surfaces for food preparation, seating and tables.
<b>Holy Well Gazebo</b>	The gazebo is located next to Holy Well, a replica of the well in Bible Hill where Acadian settlers baptized their infants. The gazebo is often used for a variety of functions, including weddings, wedding photos and small gatherings. Reservations are required.
<b>Jacob's Ladder</b>	The ladder is a steep climb of more than 175 steps and features two resting areas. The stairs are a notable feature of the park and a focal point for fitness.

## 2.3 THE RAILYARD MOUNTAIN BIKE PARK

The Railyard Mountain Bike Park is located in Truro's Victoria Park. It contains over 37 km of bike trails. Located minutes from downtown Truro, the park is a free public facility and provides mountain biking opportunities for all skill levels, from beginner to "extreme" riders.

### Creation

Created by the community, Railyard Mountain Bike Park began as an informal mountain bike trail network 20 years ago. Over time, the Town of Truro has gradually become more involved. In 2017, it was branded as Railyard Mountain Bike Park. The bike park is designed to build and expand on riders' skills through the bike skills park, short track area, and a wide range of technical trails and enhanced terrain features. These trails provide for a mix of experiences. According to the Town of Truro, the park has the potential to become a hub for the community and directly engage and inspire local youth, young adults and families in the sport. The bike park promotes a healthy, active, outdoor lifestyle and provides exciting, challenging and rewarding experiences.

### Community involvement

Since the early days of trail development, some of the best local experts have been volunteering their time and resources to develop and number the network throughout the upper part of Victoria Park. The Town of Truro considers collaboration with the mountain bike community an important asset in the Master Planning Project.

Colchester Short Track started 10 years ago as a volunteer-based community organization, and has contributed to growing the network of trails available in the region. Its work inspired the development and expansion of the Railyard Mountain Bike Park. The group began 10 years ago as a volunteer-based community organization.

Led by teachers, the organization carries out two or three trail maintenance sessions per year. They also offer a six-week program that gathers 210 riders in the spring and 190 in the fall, mostly from the nearby area.

### Stakeholders

One of the short-term actions identified in the Victoria Park Master Plan, completed in 2014, was to work with the mountain biking community to develop and maintain appropriate routes, infrastructure and education programs to manage the environmental impacts of off-road biking.

Local retailers such as Hub Cycle and Bike Monkey located minutes away from the park in Downtown Truro offer visitors resources and products. They also offer opportunities for partnerships, which may include bike rentals or demos, guided rides and mountain biking events.

A small working group was established in 2017 to include Town staff from the Parks, Recreation and Culture Department, the GIS Technician and Planning staff, as well as the Business Development Officer. Leading park volunteers and trail developers have also been active on this project. The group has been actively working since spring/summer 2017 to get branding, signage and marketing materials in place.

In 2019, this working group was expanded and a formal Project Steering Committee was established by Truro Town Council to guide the Master Planning Project.

### Recent developments

The following activities have been developed to improve infrastructure, promotion and information at the Railyard Mountain Bike Park:

**Signage:** In 2018, park signage was completed for the entrance, bike skills park, trail wayfinding, trailhead, parking and other miscellaneous items.

**Trail guides, mapping and marketing materials:** Many materials have been designed and printed. This project is ongoing.

**Photography:** A professional photographer was contracted. The Town of Truro has access to four seasons of photographs of the Railyard Mountain Bike Park.

**Public washrooms and supporting facilities:** Planning for these facilities has been initiated, but funding decisions are under discussion. Facilities under study include public washroom facilities and a small covered rest area with nearby picnic tables, garbage receptacles, bike racks, workstations. Some safety and security issues must be considered as the area is remote and some infrastructure has already been vandalized.

There is no dedicated website at this time; however, the Town of Truro is currently planning the development of a dedicated website for the Railyard Mountain Bike Park.

Furthermore, TrailFlow was contracted to inspect singletrack trails at the Railyard Mountain Bike Park for the purpose of rating each trail's difficulty level. TrailFlow inspected the trails in February 2018. The singletrack trails were rated based on the International Mountain Bike Associations (IMBA) standards, which are internationally recognized and widely used. TrailFlow adapted some of these standards to make them fit with the local reality of the Railyard Mountain Bike Park. It achieved this by leveraging its experience and knowledge of regional trails. TrailFlow also contributed to expanding the Railyard Mountain Bike Park and teaching volunteers how to build trails.

The use of winter fatbikes is also gaining popularity in the area. Local bike shops have seen an increase of 300% in the last three to four years. Considering the increase of riders in Victoria Park in winter, use of the Railyard Mountain Bike Park in

all four seasons is an added benefit for the sport and the overall attractiveness of the Park.

### Place in the community

The Railyard Mountain Bike Park is gaining importance in local community activities. This includes the growth of the annual Victoria's Secret Mountain Biking Race, which attracted 160 participants in 2017 and includes a children's component. The race is a great spectator event drawing top riders from across Nova Scotia and New Brunswick. The Truro race is always the first in the Bicycle Nova Scotia series and participation is growing. Nova Scotia's Canada Games team also uses this event as a selection race.

### 3 SITE ASSESSMENT

The Site Assessment presents all relevant information surrounding the current conditions and local context of the Railyard Mountain Bike Park. This includes:

- ▶ Trail types
- ▶ Trail conditions
- ▶ Signage and infrastructure
- ▶ Existing users and groups

The Site Assessment defines the planning baseline from which the Railyard Mountain Bike Park can grow. It also provides key strengths and weaknesses for the SWOT Analysis.



## 3.1 NETWORK

### TRAIL TYPES

The network offers a variety of trail types, each with their strengths and weaknesses for the riding experience:

- ▶ Doubletrack and park roads
- ▶ Easy singletrack trails
- ▶ Intermediate singletrack trails
- ▶ Flow trail type singletrack trails

#### Strengths

- ▶ Doubletrack and park roads (easiest), wide trails, mainly access roads with crushed stone surface (e.g. Reservoir trail)
  - ▶ These trails are suitable for beginners and make for a good first experience because of their low technical difficulty, unobstructed sightlines and low grades.
  - ▶ They also constitute the backbone of the trail system and are suitable for emergency or maintenance purposes (allowing ATVs or side-by-side vehicles to access the trail network).
  - ▶ These trails could be marked as very easy (white circle).
- ▶ Easy singletrack trails (e.g. Parent Trap)
  - ▶ These easy natural surfaced (dirt) trails are set in a larger trail corridor (grass) with wide sightlines (due to partial tree coverage and open trail corridor). This makes it possible to experiment with narrower trails than doubletrack. They also enable riders with evolving piloting skills to make trajectory errors without major consequences.
- ▶ Intermediate singletrack trails
  - ▶ Plenty of natural surface trails with many roots and rocks (technical cross-country,

also referred as “Old School”).

Appreciated by experienced riders.

- ▶ Flow trail type singletrack trails (low berms, rollers, some small jumps, few obstacles on trail surface)
  - ▶ Fun for beginner riders
  - ▶ Fun for advanced riders, who can use them at higher speeds and play with terrain variations using more advanced techniques

#### Weaknesses

- ▶ Doubletrack and park roads (easiest), wide trails, mainly access roads with crushed stone surface (e.g. Reservoir trail)
  - ▶ For more advanced riders; they give access to more difficult trails (but are not particularly interesting since they do not fit the singletrack profile sought after by mountain bikers).
- ▶ Easy singletrack trails (e.g. Parent Trap)
  - ▶ None noted
- ▶ Intermediate singletrack trails
  - ▶ Plenty of natural surface trails with many roots and rocks (technical cross-country, also referred to as “Old School”). Difficult for less experienced riders (e.g. Hawk, Rough Justice).
  - ▶ Some border on being difficult trails (especially when an abundance of roots hinders progression to the point of becoming difficult to go forward without stopping). Advanced riders appreciate rooty terrain (challenging), but this may discourage beginners.
- ▶ Advanced feature (Wallride)
  - ▶ No progression opportunities (other than jump/skills park area)

## TRAIL CONDITIONS

Trail conditions depend mainly on the method used for trail building:

- ▶ Trails on which the level of intervention is traditional manual labour, done by volunteers, before and after proper training.
- ▶ Trails on which professional work has been done by a contracting company, either for design or construction (or both).

These two methods can make a big difference in the final product. Conditions are also dependent on the combination of soil types and elevation variation.

### Strengths

- ▶ The newer trails (the ones designed by TrailFlow) drain well and sustain less damage from rainfall.
- ▶ These trails, with minimal maintenance, can last two to three years before a more in-depth intervention is needed, which helps with maintenance planning.
- ▶ Some of the trail network is more resilient to weather events and requires less maintenance.

### Weaknesses

- ▶ Some of the older trails and the ones that see a lot of traffic are dug in, or cupped, which means the surface is lower than the surrounding ground, making for less efficient drainage.
- ▶ On some trails, the abundance of obstacles such as roots (either exposed by rain-associated erosion or bad design/minimal surface work) may hinder water runoff across the trail surface – thus accumulation on trails.
- ▶ This makes these trails more prone to being damaged by rains and the passage of cyclists in wet conditions.

- ▶ Trail sustainability is one of the biggest issues for the Railyard Mountain Bike Park – some trails are deteriorating due to increased use.

## TRAIL SYSTEM CONFIGURATION

The network presents two different and distinct network configurations. This situation can be linked to different construction dynamics over the years: unsanctioned activity by a few members of the community or accepted by the Town of Truro, and part of an official plan with professional (TrailFlow) design.

### Stacked loop system (2 areas)

- ▶ Close to the pipeline trailhead/skills park area (Parent Trap, Flowtrail, Corkscrew, Start me up, etc.)
- ▶ Close to the reservoir (Hawk, Rough Justice, Ride ‘em on Down, Log Pile, Brad’s Trail, etc.)

**Linear trails** towards the upper park (Stacked, Stick ‘em up, Thrash Talkin’, Slim Shady, McCabe’s Loop) frequently cross a service road in many places.

- ▶ Trails meander left and right from main fire road/access road. The only option is to follow the route or skip some trails by the main road (less interesting option for advanced riders). These trails could benefit from more directional signage to clarify the intended direction.
- ▶ These trails could be considered as one long trail, marked by opportunities to shorten the route at intersections with access road.

### Strengths

In the stacked loop areas:

- ▶ Makes multiple routing options possible (interesting for cyclists).
- ▶ Regulates part of the flow in trails, resulting in fewer encounters (minimizes possibilities of encounters).

- ▶ Provides opportunities for easy access (maintenance, evacuations).

In the linear trail system area:

- ▶ Experience feels more remote to users, which is sought after by many riders.
- ▶ Spreading users in longer trails reduces interactions and breakage in experience.

### Weaknesses

In the stacked loop areas:

- ▶ Shorter trails may appear less inviting to advanced riders (unless challenge is on par with their expectations).
- ▶ More opportunities for breakage in experience to users less familiar with the network (reading signage or maps to determine position and direction).

In the linear trail system area:

- ▶ Little room for creativity in route planning (makes every run look the same).
- ▶ Few shortcut options in case of mechanical failure or accident (risk management).

### TRAIL DIFFICULTY DISTRIBUTION

According to TrailForks (excluding forest roads) (Town website or trail map does not mention trail length. TrailForks' user-fed information may be slightly different from actual lengths.), 37 km of trails are available:

- ▶ 0.5 km of very easy trails (1.5%)
- ▶ 16 km of beginner (easy) trails (43%)
- ▶ 20 km of intermediate (more difficult) trails (54%)
- ▶ 0.6 km of advanced (very difficult) trails (1.5%)
- ▶ 0 km of expert (most difficult) trails (0%)

### Strengths

- ▶ High volume of beginner trails is good for community building and skill progression.

### Weaknesses

- ▶ Inconsistencies may have happened in trail rating (a few trails could be incorrectly evaluated based on low elevation vs. technicality, or trail rating may have changed based on trail deterioration).
- ▶ Lack of advanced and expert trails and too many beginner trails (average trail difficulty distribution is usually 30%-40%-20%-10%).
- ▶ Skill progression (and eventually interest for advanced riders) is limited by absence of harder trails.
- ▶ Many former black trails have been made into blues and greens; there are not many advanced features, or much progression opportunities for experienced riders.

### BIKE PARK

The bike park/skills area is unlike any other type of installation in Nova Scotia, even in Eastern Canada. While mostly catered to beginner and intermediate riders, it offers a number of opportunities to work on skills that can be later applied on the trails. As more advanced trails are eventually developed in the network, more advanced features should be incorporated into the skills area.

### Strengths

Jump section

- ▶ Well built (shapes, sizes perfect for progression to intermediate level)
- ▶ It is a strength to have this type of equipment, since it offers opportunities for young riders to develop skills in a more controlled environment.

### Weaknesses

Jump section

- ▶ Lacks maintenance (eroded takeoff areas, tabletops, sides).

- ▶ Low-lying ground between jumps is subject to water accumulation. Tread surface should be raised.
- ▶ Could benefit from larger options for more advanced riders.

#### Skills area

- ▶ Some obstacles are used, others are not (too difficult/no fun?) – needs progression.
- ▶ The Wallride in the trail network lacks smaller options for riders with a lower risk level to try them out.

#### Pump tracks

- ▶ Tot track is interesting, but there is no significant pump track for youth/adult riders.



*Aerial view of the skills area (source: Town of Truro)*

### 3.2 INFRASTRUCTURES AND SIGNAGE

#### SIGNAGE

The signage in the Railyard Mountain Bike Park has received attention from the Town, as demonstrated by the physical quality of materials and regularity in placement.

#### Strengths

- ▶ Nice design
- ▶ Good placement at trail entrance points

#### Weaknesses

Identification signage present:

- ▶ Lacks information: difficulty level, distance (length)
- ▶ Placed too high for good visibility
- ▶ No directional signage (“you are here” maps at main intersections, direction of trails and trailheads)
- ▶ Few educational/rules and allowed uses signs (present at park entrance only)
- ▶ Difference between lower park signage (green, pedestrian priority) and Railyard Mountain Bike Park (purple, bicycle priority) is unclear and could be better explained

#### INFRASTRUCTURES

There are almost no infrastructures in the upper park at Railyard Mountain Bike Park, except for two parking lots:

- ▶ Main entrance of the Railyard Mountain Bike Park (627 Young Street)
- ▶ Skills Park (upper on Young Street: inaccessible outside of gate hours)

In total there is parking for about 60 cars, distributed between both parking lots.

On event nights, close to 100 cars can line up on the side of the access road, for which the gate to the municipal salt storage area is unlocked.

#### Strengths

- ▶ There is a bike repair station at the Skills area/jump park

#### Weaknesses

- ▶ No services except port-a-potty at bike park parking (for events, otherwise gated access)
- ▶ No running water on site
- ▶ No bike washing station
- ▶ No permanent washrooms in upper park area

Figure 2 Sign at trailhead about bike use

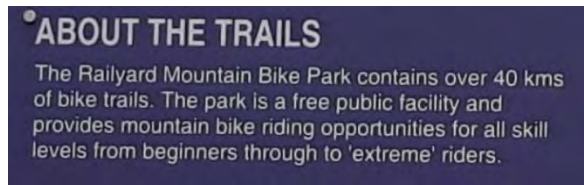


Figure 3 Unclear information on trails map on the same sign (trailhead)



Figure 4 Information about shared-use trails



### 3.3 USERS

There is a sizeable mountain bike community present in Truro, which is reflected in the number of organized biking events. Also, mountain bike and fatbike sales are on the rise at both bike shops, though the numbers fluctuate from year to year because of the size of the market.

#### GROUPS

There are a few organized user groups in Truro:

- ▶ Women on Wheels (WOW) – program supported by Bicycle NS
- ▶ Hub Cycle Spokebenders (group related to Hub Cycle Bike shop)
- ▶ Bike Monkey cycling club (informally operating, based on Bike Monkey's Facebook page)

#### EVENTS

Many events are organized for and by the community, mostly revolving around competition, which is quite popular in Eastern Canada.

- ▶ Victoria's Secret race (organized by Hub cycle)
- ▶ Colchester Short Track
  - ▶ Fun night Short track race, meant as low barrier of entry
- ▶ Colchester Bike Week (organized by the Town of Truro and County of Colchester in collaboration with volunteers and other local municipal organizations) has incorporated some mountain-bike-related events into its activities.
  - ▶ Demos (Hub Cycle)
  - ▶ Rides (different skill levels/women rides)
- ▶ The Long John Festival (also organized by the Town of Truro in collaboration with volunteers and organizations) has incorporated a fatbike race into its activities.

- ▶ Trail-building events do take place at irregular intervals. Participation reached high levels (around 50 to 60 participants) when barbecue meals were offered as part of the event (did not take place in 2019).

### Strengths

- ▶ Good seasonal distribution of events
- ▶ Good community support
- ▶ Good industry support from bike shops
- ▶ Good support from Town of Truro (integration into broader bike-themed events)

### Weaknesses

- ▶ All but one event is race-oriented (can be intimidating to, and limits participation of, first-timers or recreational users)
- ▶ Colchester Short Track and Victoria's Secret races rely on few resources – status uncertain
- ▶ Colchester Short Track: privately operated, subject to administrative obstacles



*Races in Truro are popular with kids and adults (source: Town of Truro)*

### SOCIAL MEDIA

The community is informally organized through a few Facebook groups. Each provides information on bike rides, trail building days, events, classifieds, etc.:

- ▶ Bike Truro – a community-created and operated page, where all agendas are open (public group created in 2019, 263 members)
- ▶ Colchester Short Track – a page dedicated to the race series but taking a community twist over time (public group created in 2014, 626 members)
- ▶ Bike Monkey shop – bike shop's page that also entertains a social life around its members (commercial page created in 2014, 2491 likes)
- ▶ Hub Cycle Spokebenders (public group created in 2012, 410 members)
- ▶ Hub Cycle shop (commercial page, 2120 likes)

And on a larger scale:

- ▶ Bicycle Nova Scotia
- ▶ Mountain Bike Atlantic

### Strengths

- ▶ Representation is wide and all pages are active, with recent content posted

### Weaknesses

- ▶ Nobody in charge of policing and organizing the Bike Truro Facebook page
- ▶ All different pages that do not seem to have a communications plan, but rather a go-with-the-flow type of operation

### BIKE SHOPS

Two bike shops are active in Truro (long-standing Hub Cycle and more recent Bike Monkey). This is another sign of a vibrant and active cycling and mountain bike community.

They provide full services with road and hybrid rentals and have added a fatbike and mountain bike fleet in the spring due to growing demand. Many tourists come into the shop to pick up literature about the park and ask questions about trails and access points.

### Strengths

- ▶ Both bike shops report an increase in sales
- ▶ Both bike shops are located close to the park

### Weaknesses

- ▶ Both shops are looking for profitability in a small market, which could create tensions

### VOLUNTEERS

Based on encounters on the trails and analysis of social media presence (Colchester Short Track Facebook page), the bike community in Truro seems very much as vibrant and engaged as in many other bike communities throughout Canada. However, Truro's mountain bike community seems to be at the first stage of organization. Initiatives are still fragmented, with several entry points for information and several coordination instances for maintenance and event organization.

Volunteers engage in the following activities:

- ▶ Trail building and maintenance
- ▶ Event organizing
- ▶ Planning, marketing and promotion

### Strengths

- ▶ Strong attachment to the trail system
- ▶ Deep knowledge of the trail system and inner workings of the community
- ▶ Town receives a great deal of help from the community group

### Weaknesses

- ▶ Some key volunteers show signs of tiredness

### HIKING + DOG WALKING + OTHER USES

The Railyard Mountain Bike Park trails are defined as multi-use, although priority is given (in the upper park) to bikes, as opposed to the lower park where pedestrian use is predominant.

### Strengths

- ▶ Separation of the dominant use, in a shared trail system, has the potential to facilitate education and sharing of space.

### Weaknesses

- ▶ Creates zones of potential danger for all users (in tighter trails like Slim Shady) or trails meant for higher speeds with tighter turns and visual corridor (e.g. Thrash Talkin').
- ▶ Causes confusion for all users since trails are being marketed as "mountain bike park" (even though purple signage is meant as "bike-priority" and green signage is meant as "hike priority").
- ▶ Some educational signage is needed, supported by a better division of hiking/biking/multi-use trails.

### WINTER USES

Fat biking has developed rapidly and now goes hand in hand with mountain biking trail networks, especially since it appeals to the same community. It needs to be integrated into the trail strategy, because the grooming of trails can postpone the opening of the mountain bike trails in spring by a couple of weeks.

Cross-country skiing and snowshoeing are supported by the Town of Truro (equipment is available for free, on a "first come, first served" basis).

### Strengths

- ▶ Fat biking is on the rise and both bike shops report good sales numbers and the intention of having rental fleets.
- ▶ Grooming was handled by Parks, Recreation and Culture staff in 2018 with the help of volunteers using a snowdog. The snowdog was purchase by the Town with the financial support of the community. This shows how

volunteers are invested in the success of the mountain bike park operations in winter.

### Weaknesses

- ▶ No infrastructure (e.g. heated room) in upper park makes experience difficult (users wear light garments designed for effort and have to change in their cars after riding).
- ▶ Some bike trails are used for cross-country skiing (e.g. McCabe's loop). This could cause tensions in the bike/ski community should fat biking continue to expand.
- ▶ Little information is available about trail choice for fat biking.
- ▶ Although the Town of Truro supports fat biking and snowshoeing, it does not mention these sports on its website. This could cause tensions in the community about legitimacy.

### 3.4 SITE ASSESSMENT: KEY FINDINGS

Overall, the Railyard Mountain Bike Park is a good local trail network that needs some work to address its issues and capitalize on its strengths. This will help to support the vibrant and growing mountain bike community in Truro, and increase its appeal to visitors.

#### KEY STRENGTHS

Trail network (type, difficulty, location):

- ▶ Easier trails are well built and adapted to the needs of beginner cyclists and children alike, although there could be more options available
- ▶ The intermediate-level cyclist is well taken care of; most of the trails available are suited to the intermediate rider
- ▶ A comprehensive bike park offers progression opportunities for all clienteles, from the beginner to the intermediate level (consequent with the ridership and trail difficulty distribution in the Railyard Mountain Bike Park)
- ▶ Most of the actual configuration mimics the IMBA stacked loop system, where easier trails are located close to trailheads, and more difficult trails are further away

Infrastructure and signage:

- ▶ New signs at all trail entrances

User groups, community and volunteers:

- ▶ Vibrant, involved community in the immediate area as shown by the high turnout for the community consultation
- ▶ Deep knowledge of the trail system and inner workings of the community
- ▶ Town staff involved in trail building and maintenance
- ▶ Local bike shops keen on offering information, support for events and rental services whenever needed

## KEY WEAKNESSES

Trail network (type, difficulty, location):

- ▶ Most trails are the same type (e.g. classic technical, rooty and rocky trails, almost no flowtrails)
- ▶ Few advanced trails (little to no progression for intermediate riders)
- ▶ The current shared trail network strategy and status can create confusion between user groups on multi-use trails
- ▶ No advanced options in the bikepark (exception made for the wallride feature, located away from bikepark)
- ▶ Most trails seem hard to maintain long-term because of trail type (low water-shedding capabilities)

Infrastructure and signage:

- ▶ Limited washroom facilities in the upper Victoria Park
- ▶ Lack of directional signage

User groups, community and volunteers:

- ▶ Key volunteers show signs of tiring
- ▶ Town staff and volunteers could benefit from more training on trail building methods to implement more flowtrails
- ▶ Fragmented community organization, no clear leadership and official representation for coordination with Town staff
- ▶ Multiple communication channels with no coordination

## 4 MARKET TRENDS

With the increased popularity of mountain biking in North America, a few market trends are emerging. This section presents a summary of the trends most relevant to Truro's context:




- ▶ An overview of mountain biking discipline
- ▶ Mountain biking and tourism in Nova Scotia
- ▶ Regional mountain biking offering
- ▶ The North American mountain biker profile
- ▶ Races and festivals
- ▶ Economic potential of mountain bike tourism





### 4.1 MOUNTAIN BIKING DISCIPLINES

Through the evolution of mountain biking and advances in bike technology, several distinct disciplines within the sport have emerged. Popular mountain biking areas now offer opportunities for a number of riding styles with trails designed for specific types of biking. Downhill and cross-country are among the most popular.



**Table 2 Main mountain bike disciplines**

Type	Description	Picture
Downhill mountain biking	<ul style="list-style-type: none"> <li>➤ Requires big, heavy bikes made for speed, big obstacles and mechanized uphill (chairlift, shuttles); approximately 20% (or less) of current ridership is from Eastern Canada</li> <li>➤ Needs big mountains and more infrastructures to operate</li> <li>➤ Tests the rider's ability to follow a course that is predominantly downhill through a series of berms, jumps and other features, as fast as possible</li> <li>➤ Downhill riders are advanced in their riding skills</li> <li>➤ A downhill course is typically 1-2 km in length with a means to return to the top of the course (vehicle shuttle, chair lift)</li> </ul>	
Enduro	<ul style="list-style-type: none"> <li>➤ Gaining in popularity every year</li> <li>➤ A combination of downhill and cross-country styles</li> <li>➤ Downhill-focused experience with challenging terrain; riders are also expected to bike back uphill</li> <li>➤ Requires high-tech bikes that are strong and capable enough for rough descents, efficient and light enough for going uphill</li> <li>➤ No need for big mountains in order to build enduro trails, although some natural features are required</li> <li>➤ More woman-friendly style than downhill; friendly vibe, positive and social (less race-oriented)</li> <li>➤ Attracts a wider audience</li> </ul>	
Cross-country	<ul style="list-style-type: none"> <li>➤ Most popular among riders and most common form of recreational mountain biking in the US and Europe</li> <li>➤ Singletrack trails and backcountry roads</li> <li>➤ Long continuous routes of 10-80 km over undulating terrain</li> <li>➤ Tests endurance and offers some technical riding challenges</li> <li>➤ Singletrack (narrow), natural-surface (dirt) trails and traditionally natural trails (rocks and roots)</li> <li>➤ More and more machine-built trails are available (more accessible to beginners)</li> <li>➤ Most common form of competitive mountain biking: cross-country, introduced at the 1996 Atlanta Olympics</li> <li>➤ Bikes weigh less than other mountain bikes, often 10-13 kg (22-28 lbs)</li> </ul>	

Type	Description	Picture
Fat biking	<ul style="list-style-type: none"> <li>▶ Currently growing as an alternative form of winter mountain biking</li> <li>▶ Same trails as cross-country biking (less than 10% slope is ideal)</li> <li>▶ Compacted snow trails allow wide tires to roll on it</li> <li>▶ Allows continued use of trails in winter; may also be compatible with snowshoeing</li> </ul>	
Flow trails	<ul style="list-style-type: none"> <li>▶ Machine-built trails with smooth, flowing, obstacle-free courses, featuring jumps, banked turns and short roller-coaster-like sections</li> <li>▶ Allow a safe progression of bike skills; can be ridden slow by beginners and fast by more advanced riders</li> <li>▶ Riding style open to wider audiences, pleased by the trails</li> <li>▶ Riders with cheaper, simpler bikes (front suspension only) have an equally enjoyable experience</li> <li>▶ Very positive experience for a wide range of users</li> <li>▶ Possibility of incorporating design elements that lower maintenance needs</li> <li>▶ Water-caused erosion can be limited by water-shedding capabilities associated with trail surface treatment</li> </ul>	
Bike parks	<ul style="list-style-type: none"> <li>▶ Allow a safe progression of skills</li> <li>▶ Usually offer a family-oriented environment and can be developed as a stand-alone park</li> <li>▶ Uses are similar to skateparks but have progressively larger features</li> </ul>	
Bikepacking	<ul style="list-style-type: none"> <li>▶ Mountain bike trends also include a travel and adventure-oriented segment, with a wide variety of trails (forest roads, single track)</li> <li>▶ Connected with other activities, such as camping, fishing, overnight outings</li> <li>▶ Opens access to more remote areas</li> <li>▶ Requires a lot of equipment</li> </ul>	

## 4.2 MOUNTAIN BIKING AND TOURISM IN NOVA SCOTIA

### Situating Nova Scotian mountain biking in Canada

Trail Forks is a collaborative online platform for mountain bikers. Mountain bikers upload data on trail locations and key information (length, difficulty, type of practice, etc.). Trail Forks also provides a ranking of mountain bike regions in Canada according to this information.

Nova Scotia is classified as the 5<sup>th</sup> mountain biking region in Canada. Trail Forks identifies 1,065 official and unofficial trails, for a total length of 2,190 kilometres. As many as 75 riding areas are identified, most of them (50%) in the Greater Halifax area.

Western Canada offers a mountain bike product that is different from Nova Scotia's (terrain, number of trails and kilometres, etc.). Nova Scotia's mountain bike experience is closer to that of Eastern Canada and the United States.

### Tourism and mountain biking in Nova Scotia

Nova Scotia received 2.4 million visitors in 2018. More than half of them arrived by road, but the air share is increasing. Most tourists come from Atlantic Canada (1,159,800), Ontario (600,800), the United States (235,300), Western Canada (193,200) and Quebec (119,700).

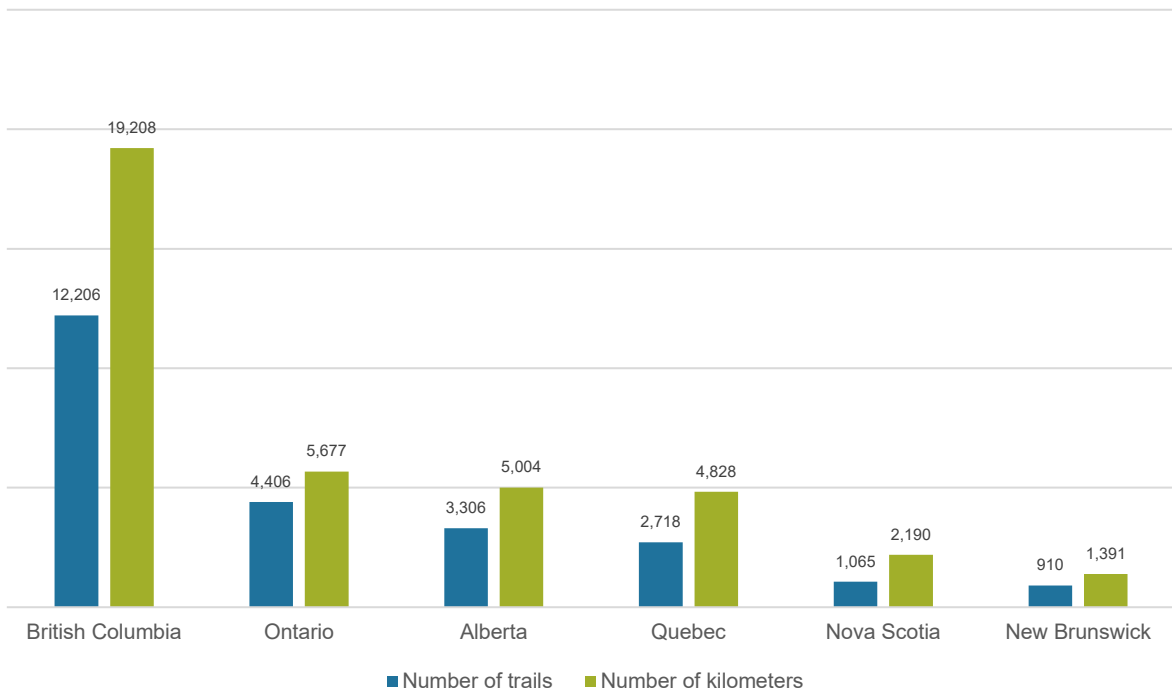
Tourism revenues have increased in the last five years, from more than \$2 billion in 2013 to close to \$3 billion in 2018. Revenues from non-resident visitors increased from \$1.3 billion to \$1.7 billion between 2013 and 2018.<sup>1</sup>

Tourism Nova Scotia identifies that 5% of pleasure visitors in Nova Scotia report cycling. Tourism Nova Scotia sees this as a growth opportunity and sees recreational/casual cyclists as the largest part of the cycling visitor market. Mountain biking specifically does not register as a growth opportunity. However, visitors like a mix of activities (e.g. tidal bore, hiking, craft beer, mountain biking). Mountain biking could be included in this growth opportunity, and Truro could become a destination for this activity.

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<sup>1</sup> <https://tourismns.ca/about-us/plans-performance/2018-tourism-performance>, accessed September 27, 2019.

Figure 5 Top 6 mountain bike regions in Canada (Trail Forks data) (revoir format des nombres)



### 4.3 REGIONAL MOUNTAIN BIKING OFFERING

In order to position the Railyard Mountain Bike Park, this section presents a brief portrait of the regional mountain biking offering within a one-hour drive of Truro. The analysis only considers mountain bike areas with trail numbers, difficulty levels and lengths equivalent to those of the Railyard Mountain Bike Park.

#### Keppoch Mountain, Antigonish

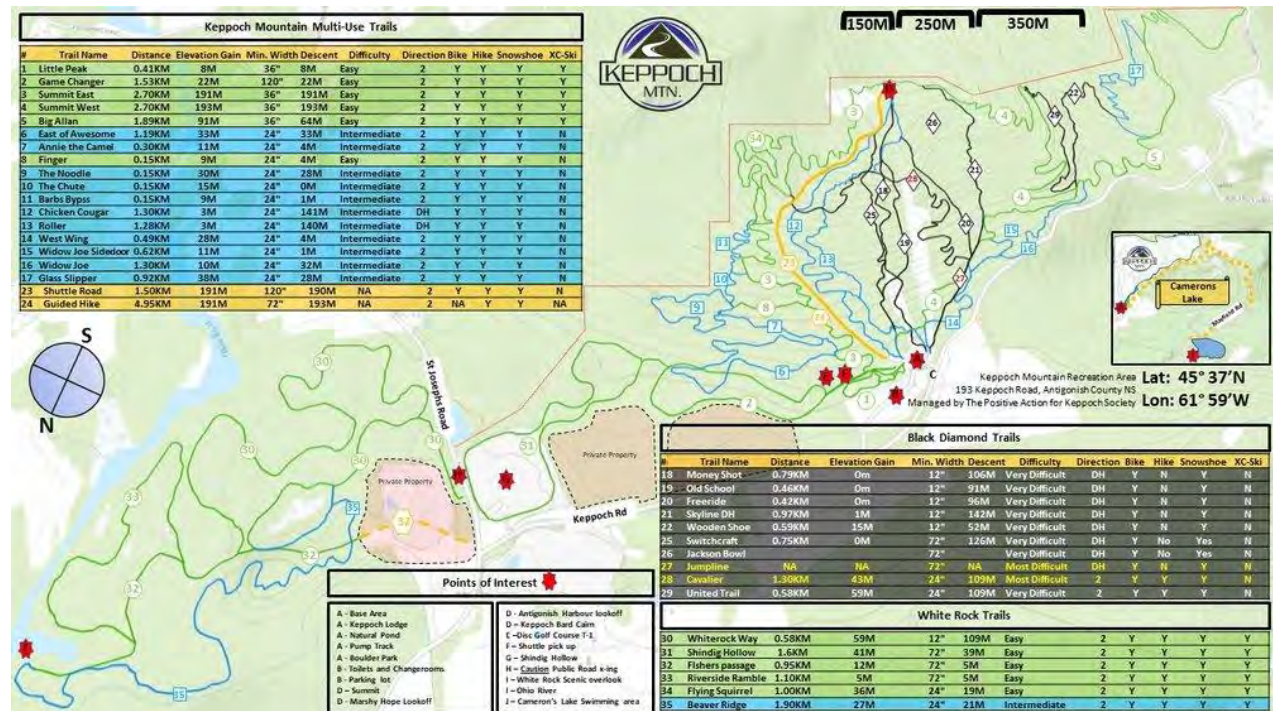
Keppoch Mountain is located on the western edge of Antigonish County. It has 300 acres of wilderness. With over 35 km of multi-use trails, the Keppoch opens the door to cycling, cross-country skiing, geocaching, trail running, hiking and walking. This includes an accessibility loop (universal access).

Keppoch Mountain is operated by Positive Action for Keppoch Society (PAK), a Volunteer Non-Profit Society developing and operating from Private Donations, Government Grants and In-Kind

Figure 6 Keppoch Mountain Trail Map

Contributions. It has a "Band Together" Membership Campaign (\$50/year/person, \$100/year/family). Fees are \$5 per day.

The Summit Shuttle Service (\$35 per day) runs Sundays from 11 am to 5 pm, but the trails are always open. Shuttles are provided by a 4x4 Truck and Trailer equipped with Tuf Racks capable of carrying 14 riders and bikes/trip (every 15 minutes). Camping on-site is available via a camping permit. The Capital Work project completed in 2019 has improved and expanded the trail network and enhanced the base area.



Source : <https://www.thekeppoch.ca/>

## **Empire Trail, Gore**

Mountain biking in Gore first began in 1995. The Blois family and friends started building trails on the farm property beginning with an 8-km loop. In 1997 the first mountain bike race was held. Events such as 8 Hours of Gore and Gorefest grew into some of the largest in Atlantic Canada with almost 500 participants.

All trails are accessible from the parking area. Visitors have to register at the Welcome Centre (passes are \$9 a day for adults and \$5 a day for children). No accommodation option is currently available.<sup>2</sup>

## **The Gorge, Kentville**

First developed in 1930, the Gorge is part of a 64.5-acre natural woodland. It has trails for mountain biking, and trails for walking and hiking in the summer. The Gorge is also a space for cross-country skiing and snowshoeing in the winter. The Gorge is open year-round for mountain biking and fat biking. It features single- and doubletrack trails for beginner to advanced riders, and a skills park for all ages.

Burgher Hill is home to Kentville's 4X track. 4X is a form of mountain bike racing that combines elements of BMX racing with mountain biking. The course for Kentville's Burgher Hill was specially designed with riders of all ages and abilities in mind. The track includes features like bridges, a rock garden, rollers, berms and jumps. The bike track on the hill is an addition to Kentville's line-up of recreation facilities.

Parking, site maps, a picnic shelter, skills park and bike repair station are available at the entrance of the park off the main trailhead on Gladys Porter Drive. Bike repair stations include air pumps and basic tools to fix or maintain your bike. Some other

stations in Kentville are located at Eaves Hollow, Town Hall, Memorial Park across from the Tennis Courts, and by the Recreation Hub. Access to the mountain bike park is free.

## **HFX area**

The greater Halifax area is teeming with trail networks ranging in size. For example, McIntosh Run was identified by mountain bikers as a worthwhile destination.

Trail creation and maintenance at McIntosh Run rely on a volunteer taskforce. The association is very proactive because a small number of members are fully dedicated to promoting and developing the network. Involvement is essential to the sustainability of the association.

The Trail Forks site<sup>3</sup> states that most, if not all, of the trails are unsanctioned. This marks the presence of a strong community. However, this could be a challenge when the time comes to promote the Railyard Mountain Bike Park as part of a larger regional mountain bike parks system. Provincial and municipal institutions can hardly promote unsanctioned trails.

## **Hostel Trails, Wentworth Ski Hill**

Originally built for XC skiing<sup>4</sup>, this area is mostly rocky-rooty single track, with an unsanctioned trail system. The area seems to have held a race for many years (Trail Forks). Access is free.

## **Fitzpatrick Mountain, Scotsburn**

Part of the Cape to Cape trail system, Fitzpatrick Mountain has a doubletrack and singletrack trail network, supported by MEC and Nova Scotia Health Promotion and Protection. The trail network is well known; however, little promotion is done. Access is free.<sup>5</sup>

<sup>2</sup> <https://www.empiretrails.ca/trails>, accessed September 29th, 2019

<sup>3</sup> <https://www.trailforks.com/region/halifax/>, accessed October 15<sup>th</sup>, 2019

<sup>4</sup> [https://skiwentworth.ca/mountain/nordic\\_skiing/](https://skiwentworth.ca/mountain/nordic_skiing/), accessed October 15<sup>th</sup>, 2019

<sup>5</sup> <http://www.capetocapetrail.ca/trails.aspx?tid=2>, accessed October 15<sup>th</sup>, 2019

**Table 3 Summary of regional riding centers**

Name	Number of trails	Access fees	Distance (km)	Vertical (m)	Services
Railyard Mountain Bike Park, Truro	66 trails 25 green, 41 blue, 3 black 0 double black diamond Primary trail type: Cross-country	Free	44	186	Port-a-potty, on-site, Parking
Keppoch Mountain	46 trails 15 green, 16 blue, 11 black 2 double black diamond Primary trail type: Downhill, cross-country	\$	35	183	Maps Welcome centre (the Lodge)
Empire Trails	29 trails 11 green, 12 blue, 3 black Primary trail type: Cross-country	\$	15	75	N/A
The Gorge	31 trails 5 green, 14 blue, 6 black 1 double black diamond Primary trail type: Cross-country	Free	19	128	N/A
HFX area	14 parks with small networks. 3 parks are bigger: McIntosh Run, Whopper Dropper and Range Trails. McIntosh Run: 25 trails (3 green, 18 blue, 1 black, 1 double black diamond) Whopper Dropper: 13 trails (3 green, 10 blue) Range Trails: 12 trails (1 green, 11 blue) Primary trail type: Cross-country	Free	McIntosh Run: 22 Whopper Dropper: 17 Range Trails: 11	McIntosh Run: 60 Whopper Dropper: 54 Range trails: 68	N/A
Fitzpatrick Mountain	25 trails 13 green, 12 blue Primary trail type: Cross-country	Free	32	209	N/A
Hostel Trails	21 trails 9 green, 7 blue, 3 black 1 double black diamond Primary trail type: Cross-country		18	218	N/A

#### 4.4 THE NORTH AMERICAN MOUNTAIN BIKER PROFILE

The average mountain biker profile was based on various sources of data from Canada and the United States. This profile provides information about age, level, frequency and motivations among mountain bikers.

There is no quantitative data about mountain bikers at the Railyard Mountain Bike Park. However, the average profile is likely to coincide with local community characteristics. Current trends will surely influence the evolution of mountain biking in Truro. Moreover, it helpfully sets out important trends that should be considered for the development of the Railyard Mountain Bike Park master plan.

Mountain biking is becoming one of the most popular outdoor activities in Canada and the United States. This activity ranked 8<sup>th</sup> in Quebec with 620,000 people (9% of the province's population). This is as much as cross-country skiing and ice hockey. The most popular activities are cycling (4 million people), hiking (3 million people), snowshoeing (1.9 million people) and calm water canoeing (1.4 million people).

In the United States, the 2018 Outdoor Participation Report mentions that cycling is the third most popular activity among adults, with 47.5 million people (16% of Americans). This data includes road cycling, mountain biking and BMX riding). The activity is even more popular among

6-17-year-old Americans. 12.5 million (24%) mention they practice mountain biking.

##### Age

60-70% of mountain bikers are 19-39 years old. According to Vélo Québec, the estimated ages of mountain bikers are as follows:

- 46% of them are 18-34
- 43% are 35-54
- 11% are 55-74

The typical mountain biker is male and white, as mentioned in a study on motivations, needs and demographics of mountain cyclists in the United States.<sup>6</sup> The Sea to Sky mountain biking economic impact study (2016) also confirms this distribution, with 77% men and 23% women.<sup>7</sup>

However, mountain biking among women is currently developing at a very fast pace. According to a survey, of 710 female mountain bikers, 46% said they first learned about mountain biking from a partner and 44% said a friend invited them out to ride. Women mountain bikers are a bit younger.

##### Level

A large portion of mountain bikers are beginners. They practise with friends, family or alone.

A study in the West Cuesta Ridge Area of the Los Padres National Forest (2012)<sup>8</sup> mentions that respondents were intermediate level cross-country riders. They tended to be more motivated by enjoyment, exercise and the natural setting, competition being of the least importance. (...) The

<sup>6</sup> Devine, C. (2012). *An Examination of the Motivations, Needs, and Demographics of Mountain Bicyclists in the West Cuesta Ridge Area of the Los Padres National Forest*. A Senior Project presented to the Faculty of the Recreation, Parks and Tourism Administration Department of the California Polytechnic State University of San Luis Obispo, p 22. Online: <https://pdfs.semanticscholar.org/842f/63a3976916a13cda14b92e407784d4f91f0e.pdf>, accessed September 26<sup>th</sup>, 2019.

<sup>7</sup> Mountain Bike Tourism Association (2016) *Sea-to-Sky mountain biking economic impact study*. Final report, 27 p. Online: [http://headwaterseconomics.org/wp-](http://headwaterseconomics.org/wp-content/uploads/Trail_Study_89-sea-to-sky-mountain-biking-impact.pdf)

[content/uploads/Trail\\_Study\\_89-sea-to-sky-mountain-biking-impact.pdf](https://pdfs.semanticscholar.org/842f/63a3976916a13cda14b92e407784d4f91f0e.pdf), accessed September 26<sup>th</sup>, 2019.

<sup>8</sup> Devine, C. (2012). *An Examination of the Motivations, Needs, and Demographics of Mountain Bicyclists in the West Cuesta Ridge Area of the Los Padres National Forest*. A Senior Project presented to the Faculty of the Recreation, Parks and Tourism Administration Department of the California Polytechnic State University of San Luis Obispo, p 22. Online: <https://pdfs.semanticscholar.org/842f/63a3976916a13cda14b92e407784d4f91f0e.pdf>, accessed September 26<sup>th</sup>, 2019.

most prominent preferred trail aspects included natural setting/interesting terrain, technicality, flow and singletrack.

The level of practice may then be considered relative to the age of the enthusiast. For example, the *Mountain Biking Market profile* (2010) also suggests that riders aged 25 years and younger prefer downhill and flow trails.<sup>9</sup>

### Frequency

Most ride 1-5 times a year. In Quebec, 12 to 15% ride more than 20 times a year. Between May and November 2015, 56% rode 1-3 times a week.

In 2015, 46% rode 1-5 hours. 39% rode 6-10 hours. On average, 75% of weekend excursions lasted 1-4 hours.

Mountain bikers prefer to travel during weekends to go mountain biking. In Quebec, 26% do not ride during the week. 41% travel from 1-5 km to ride during the week.

During weekends, 4% do not travel. 55% travel 6-50 km to ride. 9% travel 50-100 km and more.

### Motivations

Mountain bikers are mostly looking for a feeling of escape, scenery, contact with nature and physical challenge. Development of abilities is commonly shared among various levels of mountain biking. Exploring new trails, drops, speediness and risk, socialization and training/competition/events are also among the main reasons to mountain bike.

### Travel habits

More and more mountain bikers are travelling to practise this activity. The following trends provide important clues to aligning tourism strategies with

mountain bikers' preferences when they leave for one night or more.

50% of mountain bikers in Quebec travel overnight to ride. Most travellers (28%) do 1-2 trips during mountain bike season. 15% travel 3-5 times a year. 55% spend the night in commercial accommodation (hotel, bed & breakfast, etc.).

Mountain bike visitors, like many other travellers, are seeking experiences that will provide lasting memories and an escape from the busy pace of everyday life. These experiences should engage people in a personal way so, in developing the product, it is important that other less tangible factors associated with the destination and the overall experience be given full consideration. When they travel with friends sharing the same interest for mountain biking, mountain bikers will choose to explore higher-level destinations (difficulty, drops, speediness, etc.).

According to IMBA,<sup>10</sup> mountain bikers want experiences that provide:

- Connection with nature
- Escape from society
- Fun and the opportunity to feel the flow of a trail
- Challenge that tests the rider's technical skill
- Exercise that strengthens the body and mind
- Variety of trails that have their own distinctive personalities
- Connections to other trails and routes that create a range of possibilities
- Camaraderie among friends and new acquaintances
- A sense of belonging from trails that welcome mountain bikers
- Convenient facilities that make the rider's experience complete

<sup>9</sup> Parks Canada/Corporate (2010). *Secondary Research – Mountain Biking Market Profiles*. Final Report, p.33. Online: [http://naturetrailssociety.com/wp-content/uploads/2015/04/Mountain-Biking\\_Market-Profiles-for-Parks-Canada-2010.pdf](http://naturetrailssociety.com/wp-content/uploads/2015/04/Mountain-Biking_Market-Profiles-for-Parks-Canada-2010.pdf), accessed September 26<sup>th</sup>, 2019.

<sup>10</sup>Webber, P. (2007). *Managing Mountain Biking; IMBA's Guide to Providing Great Riding*. International Mountain Bicycling Association, 256 p.

When they travel with their families, mountain bikers will prefer destinations with a balanced and diversified offer, with comfortable options for children.

In British Columbia, mountain bike tour operators have focused on continually developing new experiences and seeking new riding destinations in an ongoing effort to keep their product fresh and attract repeat visitors.<sup>11</sup>

The tour operators identified a number of key attributes that they look for in a destination, over and above great trails. Communities also need to:

- ▶ Have an accessible trail network
- ▶ Be friendly and welcoming
- ▶ Provide good amenities, especially accommodation and dining options
- ▶ Be easily accessible via major highways and airports (shuttles available)
- ▶ Offer access to good local partners and guides

To truly capitalize on the success of a well-planned and well-constructed trail network, the community must also consider the needs and the abilities of visitors. A bike shop with bike rentals, the availability of convenient transportation to the trailhead, a selection of restaurants and accommodation all help to round out the mountain biking experience.

#### 4.5 RACES AND FESTIVALS

Many events such as large-scale and local races, festivals, and consumer shows are currently spreading in the mountain biking area. Events can generate a substantial economic impact for the

host community, as IMBA shows through a quick review of mountain bike events.<sup>12</sup>

A recent study<sup>13</sup> in Oregon measured the effects of mountain bike races on the local economies. Oregon's rural communities, particularly communities that once relied on timber revenues, are seeking new business models to sustain themselves, and many are looking to the recreation industry to drive business growth and create jobs. The one-day High Cascades 100 Endurance Mountain Bike Race, three-day Mountain Bike Oregon, and one-day USA Cycling Marathon Mountain Bike National Championships drew more than 1,700 people from 28 states, as well as Canada, Austria, Australia and New Zealand. Sixty-five percent of the visitors were from outside Oregon. In addition to generating jobs, Mountain Bike Oregon brought \$1.2 million in direct sales into the Oakridge economy. Restaurants, shops and hotels saw profits from the High Cascades 100, which brought almost \$400,000 to Bend. And visitors to the USA Cycling Marathon, also held in Bend, spent some \$200,000.

There is less information about economic outcomes generated by mountain bike events in Canada. However, British Columbia's mountain biking strategy has included races and events in its comprehensive scope. It outlines ways to grow mountain biking through increased participation, developing trails and other infrastructure, and realizing economic development benefits through tourism. This strategy has recently attracted the interest of the Halifax Regional Council.<sup>14</sup> For example, festivals are a good opportunity to put

<sup>11</sup> Destination BC Corp. (2015). *Mountain Bike Tourism. The essential guide to developing, managing and marketing mountain bike tourism product in British Columbia*. Final Report, 72 p. Online: <https://www.destinationbc.ca/content/uploads/2018/08/Mountain-Bike-Tourism-TBE-Destination-BC.pdf>, visited September 26, 2019.

<sup>12</sup> <https://imbacanada.com/economic-benefits-of-mountain-bike-tourism/>, accessed September 26<sup>th</sup>, 2019.

<sup>13</sup> <https://www.cyclingnews.com/news/mountain-bike-races-bring-big-bucks-to-local-economies/>, accessed September 26<sup>th</sup>, 2019.

<sup>14</sup> <https://www.halifax.ca/sites/default/files/documents/city-hall/regional-council/190129rc1412.pdf>, accessed September 26<sup>th</sup>, 2019.

the spotlight on a destination through high-quality visual content.<sup>15</sup>

The *Canadian Mountain Bike magazine* reports on the main mountain biking races, events and marathons in Canada.<sup>16</sup> Alberta, Ontario and British Columbia are leading venues with a full agenda of more than 10 events each, ranking from regional to world-class events. There is a wide choice of races, from youth racing to confirmed mountain biking events, and styles (XC, XCM, XCO, XCT, Enduro, etc.).

Quebec is also well positioned. The number of events exceeds 30 and most competitive styles are represented. Some races are for women, such as the Enduro Juliana in Bromont. Some races are reaching regional and international levels. For example, the Marin Wildside Enduro series includes events in Quebec and British Columbia. Quebec hosted the Canadian Cup and World Championships in 2019. However, a large share of the events is also locally based.<sup>17</sup>

The Maritime Provinces, and more particularly New Brunswick and Nova Scotia, have distinct

profiles. New Brunswick is the most active province, with 12 events of regional span: Coal Miners Lung (Minto), White Rock (Hillsborough), Caraquet XCO (Caraquet), etc. Connecting Albert County reports that races have become more popular with participants coming from all over the Maritimes, some from Ontario and from the U.S. Limited accommodation (mainly camping) is available in Elgin and race participants can receive 15% off overnight accommodation at Fundy National Park.

Five regional mountain biking events are held in Nova Scotia (table below). Victoria's Secret is one of the most famous because it happens quite early in the season. Short Track Series provides a race event for youth at the regional level.

In addition, some larger events, such as the **Guysborough Grand Fondo/Lost Shore Grand Fondo** now include a mountain bike ride choice (30-35km).<sup>18</sup>

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<sup>15</sup> <https://www.velirium.com/>, accessed October 15<sup>th</sup>, 2019.

<sup>16</sup> <https://cyclingmagazine.ca/mtb/2019-provincial-cross-country-and-marathon-calendar/>, accessed September 26<sup>th</sup>, 2019.

<sup>17</sup> <https://cyclingmagazine.ca/sections/ridesevents/calendrier-velo-de-montagne-quebec-2019/>, accessed September 26<sup>th</sup>, 2019.

<sup>18</sup> <https://www.granfondoquysborough.ca/#route>, accessed September 26<sup>th</sup>, 2019

Figure 7 Mountain Bike Races in Nova Scotia

Date	Event	Road Race	MTB	Time Trial	Gravel	Other
Sun, Apr 28, 2019	Dollar Lake Grinder				◆	
Sun, May 5, 2019	AMP Road Circuit Race	◆				
Sun, May 12, 2019	Falmouth Road Race	◆				
Sun, May 19, 2019	Victoria Secret		◆			
Sat, May 25 and Sun, May 26 2019	Tour de Keji	◆		◆		
Sat, Jun 8 and Sun, Jun 9 2019	PEI Stage Race (Out of Province)	◆				
Sun, Jun 9, 2019	Gore MTB race		◆			
Sun, Jul 7, 2019	Riverside Speedway Turbocrit (Track)					◆
Sun, Jul 14, 2019	Swashbuckler		◆			
Sun, Jul 21, 2019	Keppoch MTB		◆			
Sat, Aug 10 and Sun Aug 11, 2019	Cape Island RR and Provincial TT Championship weekend	◆		◆		
Sat, Aug 17, 2019	Kentville Canada Cup		◆			

Source: [www.bicycle.ns.ca](http://www.bicycle.ns.ca), accessed September 26<sup>th</sup>, 2019

## 4.6 ECONOMIC POTENTIAL

Currently, the Railyard Mountain Bike Park attracts local and out-of-town riders. According to the Steering Committee, and the consulted partners, even though the RMBP has seen a rise in its regional attractiveness, it is still primarily a community network visited mostly by local riders.

Mountain bike tourism is an opportunity for economic development for local communities. It can attract visitors that would not have considered the destination if it were not for an interesting mountain bike network.

This section provides an estimate of potential mountain bike visitor expenditures in Truro.

### Potential market

As previously outlined, the participation of the Canadian and US populations in mountain biking is on the rise.

However, reliable data regarding population participation in mountain biking is scarce, and no studies specifically on Nova Scotia were found. The following estimates are deduced from surveys and studies conducted in other provinces and in the US.

Based on available data, it is estimated that between 4% (US average) and 9% (Quebec average) of the active population participate in mountain biking. In order to estimate a potential market for Truro, it will be considered that 5% of the population in the Maritime (15 years old and more) participate in mountain biking. This translates into a potential of more than 81,000 riders in the Maritimes market, which is the main market in the scope of this 7- to 10-year Master Plan.

**Table 4 Maritimes MTB riders estimate**

Province	Population (15+)	Riders (5%)
Nova Scotia	834,748	41,737
New Brunswick	664,784	33,239
PEI	132,414	6,621
<b>Total</b>		<b>81,597</b>

These 81,000 riders will make more than 646,000 outings in the year. The following table presents the distribution of riders according to their number of outings per year, e.g. 31% of riders make 4 outings per year.

**Table 5 Potential MTB outings estimate**

Share of riders	Outings per year	Total no. of outings
25%	1.5	30,599
31%	4	101,181
18%	7.25	106,484
15%	15	183,594
11%	25	224,393
<b>Total</b>		<b>646,251</b>

A large share of those outings will be done within a few kilometres of the riders' homes. However, 9% of riders will travel more than 50 km to reach a practice site. By becoming a must stop/must see riding centre in the Maritimes, the RMBP can attract its share of these out-of-town outings.

By becoming one of the top 5 destinations in the Maritimes, it is reasonable to suggest that Truro will attract 15% of the market for long-distance outings.

This means there is a potential of 8,700 visits per year by out-of-town riders.

By comparison, there were more than 66,000 visits from mountain bikers to Squamish, BC, in 2017. Squamish (and the Sea-to-Sky region) is a world-renowned mountain bike destination. Aiming for

10% to 15% of Squamish ridership in Truro is a reasonable objective.

In Squamish, 73% of visits are from same-day visitors. The same ratio was used for Truro, in part because of the proximity to Halifax (like Vancouver in the case of Squamish). This translates into 6,300 same-day visits and 2,400 overnight visits.

### Mountain bike visitor expenditures

While visiting Truro, mountain bikers will spend money for transportation, food, beverages, accommodation, biking equipment, etc.

The Town of Truro has estimated the amounts spent by visitors for festivals and events tourism in Truro as:

- ▶ \$47 per person per day for single-day visitors
- ▶ \$102 per person per day for multi-day visitors

Recent economic impact studies in Quebec and BC<sup>19</sup> tend to show that the spending profile of cyclists and mountain bikers is slightly higher than the average leisure traveller:

- ▶ \$60 per person per day for single-day visitors
- ▶ Up to \$240 per person per day for multi-day visitors

Tourism Nova Scotia's expenditure estimate for travellers from Atlantic Canada is \$130 per person per day for multi-day visitors.

These levels of spending provide us with a bracket of potential annual spending by mountain bike visitors in Truro's local businesses:

- ▶ \$540,000 (Truro festivals and events spending profile)
- ▶ \$607,000 (average Atlantic Canada traveller spending profile)

- ▶ \$951,000 (Quebec and BC cycling tourist spending profile)

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<sup>19</sup> Mountain Bike Tourism Association (2016) *Sea-to-Sky mountain biking economic impact study*. Final report, 27 p. Online: [http://headwaterseconomics.org/wp-](http://headwaterseconomics.org/wp-content/uploads/Trail_Study_89-sea-to-sky-mountain-biking-impact.pdf)

[content/uploads/Trail\\_Study\\_89-sea-to-sky-mountain-biking-impact.pdf](http://headwaterseconomics.org/wp-content/uploads/Trail_Study_89-sea-to-sky-mountain-biking-impact.pdf), accessed September 26<sup>th</sup>, 2019.

## 4.7 MARKET TRENDS: KEY FINDINGS

### An overview of mountain biking discipline

- ▶ Downhill and cross-country are the two most popular mountain bike disciplines. There has been a recent rise in the popularity of flowtrail experience.

### Mountain biking and tourism in Nova Scotia

- ▶ Tourists in Nova Scotia mainly arrive by car and the majority are from Atlantic Canada and Ontario.
- ▶ Tourist spending has been on the rise in the last five years in Nova Scotia.
- ▶ Tourists who engage in outdoor activities are seeking a mix of activities (e.g. tidal bore, hiking, craft beer, mountain biking).

### Regional mountain biking offering

- ▶ Truro's mountain bike network is one of the largest in the province.
- ▶ Nova Scotia's mountain bike trails are mainly cross-country, with only Keppoch offering some downhill trails.
- ▶ Unlike the Railyard Mountain Bike Park, a lot of the free access trails are unsanctioned, making investments and promotion more difficult.
- ▶ Riding centres with the most services often charge a fee to access the network.

### The North American mountain biker profile

Mountain biking popularity is on the rise.

- ▶ The typical mountain biker is male and white, but the profile is diversifying.
- ▶ The core of mountain bike adepts are between 18 and 55, which means mountain bikers can be active most of their adult life.
- ▶ A large portion of mountain bikers are beginners and intermediates. They practise with friends, family or alone.

- ▶ Mountain bikers will travel (overnight) to practice sites. When they travel with their families, they prefer destinations with a balanced and diversified offer, with comfortable options for children.
- ▶ Facilities on-site and close by (accommodation, restaurants, shops, etc.) play a role in the choice of the destination.

### Races and festivals

- ▶ The organization of mountain bike events is seen as an economic opportunity for many communities.
- ▶ Truro is well positioned in Nova Scotia for its mountain bike races like Victoria's Secret.

### Economic potential of mountain bike tourism

- ▶ Truro could see up to 8,700 visits per year by mountain bikers from the Maritimes.
- ▶ These visits represent new expenditures of between \$500,000 and \$950,000 for Truro's businesses.

## 5 GOVERNMENT AND INDUSTRY PARTNERS

This section draws on interviews held with the main key actors in government and the tourism industry:

- ▶ Tourism Nova Scotia
- ▶ Community, Culture and Heritage Nova Scotia
- ▶ Mountain Bike Atlantic (ACOA)
- ▶ Economic development and partnership institutions
- ▶ Municipality of the County of Colchester

The following table summarizes the recommendations and potential partnerships, collaborations and funding identified during interviews with those key actors.



**Table 6 Potential partnerships, collaborations and funding identified during interviews**

Strengths	Concerns	Opportunities/suggestions
<ul style="list-style-type: none"> <li>▶ The Railyard Mountain Bike Park has a positive reputation among stakeholders and in the community</li> <li>▶ Stakeholders support the Town’s vision to invest in the park</li> <li>▶ Stakeholder programs, initiatives and projects can help enhance and promote the park</li> <li>▶ Truro/Colchester has active organizations working to promote business development and quality of life</li> <li>▶ Town staff have a collaborative relationship with the grassroots developers of the park</li> <li>▶ The Railyard Mountain Bike Park is a grassroots development success story, which the town and county have facilitated and helped to enable</li> <li>▶ There are other MTB venues and promotion initiatives in the Atlantic Region that can help promote the park and establish NS as part of a regional destination</li> <li>▶ The County and province are investing in complimentary facilities, such as the Cobequid Trail and Blue Route Provincial cycling network</li> <li>▶ Short Track series, with its strong participation numbers, particularly with youth, is a grass roots success story</li> </ul>	<ul style="list-style-type: none"> <li>▶ The park lacks amenities needed to run programs and events</li> <li>▶ Trail variety is limited</li> <li>▶ Quality of trails is diminishing as use increases and surface material is eroded</li> <li>▶ The Railyard Mountain Bike Park lacks an online profile</li> <li>▶ The Railyard Mountain Bike Park is not visible from Victoria Park’s main entrance, which is where most visitors would go to find it</li> <li>▶ It is hard for uninitiated / unfamiliar riders to learn about the park and explore it</li> <li>▶ Wayfinding to the park and within the park should be improved</li> <li>▶ Accessing the park by bicycle is difficult due to lack of infrastructure and wayfinding in the town</li> <li>▶ Planned gateway / amenity area will be hard to service compared with Vic Park’s main entrance (MTB Atlantic only)</li> <li>▶ Volunteerism is a fragile resource that should not be over-utilized</li> <li>▶ With no Regional Tourism entity, there may be a gap in promotion capacity targeting NS and the Atlantic Region</li> </ul>	<ul style="list-style-type: none"> <li>▶ Look for help from local business development organizations to raise awareness and engagement level of local businesses</li> <li>▶ Identify and learn about the target audience. For example, family friendly destinations recognize needs of an all-ages travel group; Mountain Bikers will be hungry and thirsty, etc.</li> <li>▶ Package the Truro experience / lifestyle as part of the MTB destination product and vice versa</li> <li>▶ Economic Development Organizations are working to promote the Truro experience and could play an important role in marketing and promotions</li> <li>▶ Resources to explore include CCH recreational facility/community development/rec trail development funding; CCH funding for sport organizations (short track); TNS experience listings on Novascotia.com; ACOA funding for capital projects and marketing; CCH and TNS planning and advisory assistance</li> <li>▶ Tourism NS can help get the RMBP on Novascotia.com</li> <li>▶ Optimize the online profile of the park and its brand</li> <li>▶ Ensure adequate information is available before the trip and at the destination to encourage new visitors and help beginners feel comfortable visiting and using the park</li> <li>▶ Consider strategies that take a regional view to maximize collaboration potential with organizations that have a regional/provincial mandate</li> <li>▶ The vision of the Nova Scotia Shared Strategy for Trails is to support a wide range of trail experiences. There may be a demand for more MTB experiences and an interest in supporting them</li> <li>▶ Focus on meeting high demand for more trail diversity in the park – particularly flow trails</li> <li>▶ The MTB Atlantic destination marketing initiative recommends targeting the “near market” in the early stages i.e. MTB’ers in NS and the Atlantic Region who will arrive by car with their own equipment, but who may stop at a shop to pick up gear, stay overnight and eat in town</li> <li>▶ Destination marketing and development should consider the relationship between travel time and activity time (roughly 1:2)</li> <li>▶ Make an effort to link park plans to the community’s physical activity strategy. Take note of CCH priority to invest in accessible facilities that benefit as many in the community as possible. Focus on reducing barriers to participation. Identify excluded demographics and the barriers they face</li> <li>▶ Maintain open communication with community and government partners</li> <li>▶ Take note of community organizers’ demand for amenities to run community programs (short track in particular)</li> <li>▶ Maintain collaborative relationships with grassroots organizers and explore ways to enable them by reducing administrative burdens and tasks that can be done more efficiently by contractors or staff</li> </ul>

## **5.1 GOVERNMENT AND INDUSTRY PARTNERS: KEY FINDINGS**

### **Strengths**

- ▶ The Railyard Mountain Bike Park has a positive image: community based and attractive for youths.
- ▶ Economic partners are interested in participating in its development.

### **Concerns**

- ▶ The riding experience could be enhanced (services, trail diversity, maintenance).
- ▶ The bike park is relatively hidden and difficult to find/access for visitors.
- ▶ Tourism promotion may be more difficult with no regional tourism entity.

### **Opportunities**

- ▶ Reach into the beginner and intermediate ability level market, as well as the family market.
- ▶ The “near market” with visitors arriving by car from Atlantic Canada should be the short-, medium- term priority.
- ▶ Promote the whole Truro experience with the Railyard Mountain Bike Park as part of it.
- ▶ Promotional help can be found with MTB Atlantic and Tourism Nova Scotia.
- ▶ Support the community organizers to maintain their successful initiatives (e.g. Short Track Series).
- ▶ Funding support is possible at the government level (NS, ACOA), but also locally through private partnerships.

## 6 BEST PRACTICES AND CASE STUDIES

The following section is an overview of the current best practices in mountain biking. Three case studies are presented as examples of how these best practices can be implemented.

This section summarizes best practice recommendations, based on IMBA standards and Vélo Québec expertise in the following sectors:

- ▶ Design and construction criteria
- ▶ Signage criteria
- ▶ User co-existence (for multi-use trail system)
- ▶ Support services



## 6.1 BEST PRACTICES

### DESIGN AND CONSTRUCTION CRITERIA

#### Natural surface trails (singletrack trails)

Singletrack trails are narrow ribbons of dirt (usually mineral dirt that has been compacted) that feature technical challenges (natural or man-made obstacles) suited for different skill levels. Over the years, trail development has gone from using natural features (rocks, roots) to modifying the terrain with manual and mechanized tools in order to refine the trail experience.

Two trends have been observed in recent trail developments:

- ▶ Shaping the trail surface to control trail experience and increase water drainage, thus minimizing maintenance.
- ▶ Emphasizing natural features (rock slabs, etc.) or building wooden structures to adapt the trail to a specific skill level.

According to International Mountain Bike Association (IMBA) standards, used in North America and worldwide, the following 11 principles should guide trail building.






**Table 7 IMBA principles for trail building**

Principle	Description
Locate the track on a sidehill	It is much easier to drain water away from a track located on a slope than one on flat ground, and it is easier to keep users on the track.
Avoid the fall line	Tracks should always climb or descend a slope gradually, rather than travelling directly up or down it. Tracks that travel directly up or down hills (fall-line tracks) create a path for water that erodes soil and creates gullies. Riders may then widen tracks by riding around gullies.
Use the 'half rule' to guide track alignment	A track's grade should never exceed half the grade of the sidehill it is located on. Grade is the elevation gained divided by the distance of the segment of the track (expressed as a percentage). A track across a sideslope of 20% should not exceed 10%.
Follow the 'ten percent average' guideline for sustainable grade	The average track grade is the slope of the track for an entire uphill section. Generally, an average grade of 10% or less is most sustainable.
Maximum sustainable grade	Typically, the maximum sustainable track grade is about 15% for a short distance, but it is site-specific and varies with track alignment, use of the half rule, soil type, annual rainfall, vegetation, use of grade reversals, type of users, number of users and level of difficulty.
Grade reversals	Most tracks benefit from grade reversals every 6–16 metres. A grade reversal is a spot at which a track drops subtly and rises again, which forces water to drain off the track.
Outslope	Most tracks should be built with a 5% outslope. An outslope is a tilt on the downhill or outer edge of the track, which encourages water to sheet across and off the track in a gentle manner instead of funnelling down the track's centre.
Adapt track design to soil texture	Uniform soils dominated by one particle type such as sand are most sensitive. A mix of different types of soil particles drains well and holds together. The presence of rock and gravel can improve a soil's ability to withstand erosion.
Minimize user-caused soil displacement	Soil displacement by users can be reduced by three tactics: consistent flow, insloped turns and armouring. Consistent flow avoids abrupt and inconsistent turns that make riders brake hard or skid. Insloped turns (or bermed turns) improve track flow and reduce skidding. They must be carefully designed to drain water and withstand user impacts. Armouring involves hardening the surface with gravel, rocks, synthetic materials or wooden boardwalks. It can be used to elevate the track tread, especially in soft or wet terrain, or to armour the track against user-caused erosion.
Prevent creation of unauthorized tracks	Unauthorized track creation can be reduced by having a stable and predictable surface and providing a high-quality experience that meets riders' needs.
Maintenance	Track maintenance, as well as track design, should focus on allowing water to drain off the track and containing users on the track.

## Criteria for difficulty levels

In addition to the 11 basic trail-building principles, more precise criteria are proposed for evaluating and planning the difficulty level of the trails built. These criteria rely on four measurable elements that combine to determine the trail's technical difficulty: trail width, surface, slope and obstacle height.

Figure 8 IMBA Trail Difficulty Rating System

IMBA Trail Difficulty Rating System					
					
	EASIEST WHITE CIRCLE	EASY GREEN CIRCLE	MORE DIFFICULT BLUE SQUARE	VERY DIFFICULT BLACK DIAMOND	EXTREMELY DIFFICULT DBL. BLACK DIAMOND
TRAIL WIDTH	72" (1,800 mm) or more	36" (900 mm) or more	24" (600 mm) or more	12" (300 mm) or more	6" (150 mm) or more
TREAD SURFACE	Hardened or surfaced	Firm and stable	Mostly stable with some variability	Widely variable	Widely variable and unpredictable
AVERAGE TRAIL GRADE	Less than 5%	5% or less	10% or less	15% or less	20% or more
MAXIMUM TRAIL GRADE	Max 10%	Max 15%	Max 15% or greater	Max 15% or greater	Max 15% or greater
NATURAL OBSTACLES AND TECHNICAL TRAIL FEATURES (TTF)	None	Unavoidable obstacles 2" (50 mm) tall or less  Avoidable obstacles may be present  Unavoidable bridges 36" (900 mm) or wider	Unavoidable obstacles 8" (200 mm) tall or less  Avoidable obstacles may be present  Unavoidable bridges 24" (600 mm) or wider  TTF's 24" (600 mm) high or less, width of deck is greater than 1/2 the height	Unavoidable obstacles 15" (380 mm) tall or less  Avoidable obstacles may be present  May include loose rocks  Unavoidable bridges 24" (600 mm) or wider  TTF's 48" (1,200 mm) high or less, width of deck is less than 1/2 the height  Short sections may exceed criteria	Unavoidable obstacles 15" (380 mm) tall or less  Avoidable obstacles may be present  May include loose rocks  Unavoidable bridges 24" (600 mm) or narrower  TTF's 48" (1,200 mm) high or greater, width of deck is unpredictable  Many sections may exceed criteria

Source: <https://www.imba.com/sites/default/files/content/resources/2018-10/IMBATrailDifficultRatingSystem.jpg>, accessed October 15<sup>th</sup>, 2019

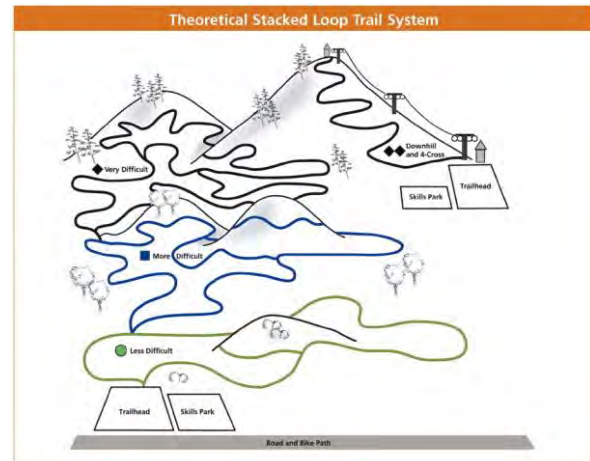
## STACKED LOOP SYSTEM

IMBA recommends that, whenever possible, a trail system should be designed with the easiest trails next to the trailhead. This way, beginner clientele can access the easiest trail with a reduced risk of being accidentally stuck on a harder trail. These beginner trails should offer the most services, have abundant signage and allow for short loops, so that the length of an outing can be tailored for a public that is either less experienced or not in a physical condition to cycle for an extended amount of time.

As trails are located further away from the trailheads, they can be increasingly difficult, and offer a lower level of service, because the clientele are more experience and independent. However, signage is still important everywhere in the network. More over, signs clearly explaining the difficulty level of the trails will also act as a deterrent to less experienced users.

This type of network layout also helps to manage crowding on the trails, thus reducing the possibilities of conflictual encounters on the trail and enhancing the trail experience for all users. All trails should still be accessible for any emergencies (e.g. evacuations) and more isolated trails should receive careful attention in the emergency plan.

Figure 9 Stacked loop system, IMBA



Source: *Managing Mountain Biking, IMBA's Guide to providing great riding, International Mountain Bicycling Association, 2007, p.51*

## SIGNAGE CRITERIA

Signage plays different roles in a trail network. It can be used to enhance user experience, ensure safety and promote co-existence among different user groups.

### Informational signage

- ▶ Name, difficulty level and length of trail should appear on signs
- ▶ Should be installed at the rider's eye level (must factor in snow coverage if used four seasons)

### Directional and wayfinding signage

- ▶ Map of trail system at major intersections (with "you are here")
- ▶ Signs indicating direction to parking/service area
- ▶ Signs indicating direction and proximity of major trails/trail areas

### Educational signage

- ▶ Clarify and communicate the two-colour code for priority already present in the park

- ▶ Green-themed signage for pedestrian priority (Lower Victoria Park)
- ▶ Purple-themed signage for bike priority (Railyard Mountain Bike Park)

### Safety signage

Mountain biking involves a certain amount of risk, but this does not mean safety should be ignored. A minimal amount of signage is needed to favour a safe experience and, in the event of an incident, proper response, which starts by enabling users to reach out to emergency services. IMBA Canada recommends using signage as part of risk mitigation. This is achieved on two levels (incident prevention and incident response) by:

#### Prevention

- ▶ Describing the trail difficulty using a trail rating system displayed at trail system entry point (at the trailhead kiosk or on a sign) – and displaying these ratings on trail signage
- ▶ Providing signage that alerts users to elements of increased risk:
  - ▶ On obstacles hard to see from a rider’s perspective, install signs well before obstacle
  - ▶ Whenever a ride-around option is available, signage should indicate it
- ▶ Using language that appeals to users (and resorting to pictograms rather than text for all on-trail signage)
- ▶ Including warnings about natural outdoor hazards (such as deadfall, weather, animals, etc.)

#### Response

- ▶ Providing directions to the nearest health care facilities and listing the hours of operation

- ▶ Placing signs along the trail to facilitate communicating the location of the injured party to EMS. This was done in 2018, when different government organizations collaborated to add 35 civic addresses with identifying signage to ambulance-accessible locations within Victoria Park to improve safety.

### SHARED USE, SINGLE-USE OR PREFERRED TRAILS: THE IMBA APPROACH

The International Mountain Bicycling Association (IMBA) recommends that most trails accommodate all types of users and some be designated for specific uses, such as mountain biking or hiking, in order to provide a better experience.

Shared-use trails accommodate the needs of most users, and help build a trail community. They are also cost-effective and have less impact on the land (since you need less trails in the network, which translates into less impact). They also empower responsible trail users.

“Generally, IMBA believes most trails should be shared-use. When trails are well designed and visitors observe basic trail etiquette, most people, whatever their means of conveyance, will have a satisfying experience on shared trails.

However, there are specific situations where separated trail users may be a better choice. This can be accomplished through preferred-use trails as well as single-use trails<sup>20</sup>.”

Some bike trails should be designated as mountain bike-preferred to ensure a positive experience and avoid accidents (e.g. flow trails meant to be used at speed and incorporating jumps and banked curves, one-way descending trails or difficult trails set away from access points).

<sup>20</sup> Managing Mountain Biking, IMBA’s guide to providing great riding, International Mountain Bicycling Association, 2001, pp. 37-39

## THE PARKS CANADA APPROACH

Parks Canada has published national guidelines<sup>21</sup> in order to support Park Directors in the implementation of mountain bike trails. All trails are designated as multi-use, like in Fundy National Park<sup>22</sup> and Banff National Park<sup>23</sup>.

They also rely on a trail classification system<sup>24</sup> to determine which types of trails are built in which types of terrain, and the level of service found in each. This system is aimed at directing visitors based on their skill level and not by the type of use. Parks Canada gives the users access to all trails, while organically directing users on specific trails through information and communication. This allows for a trail like “Topp Notch” in Banff National Park to be multi-use and marketed as a mountain biking trail for advanced riders<sup>25</sup>.

## USER CO-EXISTENCE (FOR MULTI-USE TRAIL SYSTEM)

In order to promote co-existence among users, technical and social factors are to be considered in trail design.

### Technical factors

- ▶ Design and construction of multi-trails:
  - ▶ Intersection treatment (visual corridor widening, signage, installation of chicanes before crossings to regulate speed) tends to lower risks of user conflict and trail erosion.
  - ▶ IMBA’s Guidelines for a quality trail experience (GQTE26) identify some features appropriated for multi-use trails and some best suited to preferred-use and single-use bike trails:

- **Suitable for multi-use trails:** Rollers, small berms, rock gardens, slow-speed technical features, clear sightlines on faster trail sections.
- **Unsuitable for multi-use trails** (best for preferred-used or single-used trails): High-speed features, jumps, large drops, elevated trail structures, gravity trails, any feature where user cannot safely yield or where primary experience would be significantly diminished by other uses (including riders in opposite direction).

- ▶ Offer a mix of directional and two-way trails:
  - ▶ Some trails could benefit from being shared-use (e.g. main trails and connectors, some singletrack trails if large enough to ensure safe passing of pedestrians by bicycles).
  - ▶ Some more technical or difficult trails could benefit from being directional to minimize risks of encounters (when visual corridor is tight), which makes for a positive experience for riders, or in flow trails or descending trails, for example.
- ▶ Provide clear signage:
  - ▶ Identify shared trails and accepted uses (bike, pedestrian, etc.).
- ▶ Offer a variety of experience on the same trails (for mountain bike-preferred or specific trails):
  - ▶ Adding trail elements (technical trail features or TTFs) to existing trails:

<sup>21</sup> <https://www.pc.gc.ca/en/agence-agency/bib-lib/politiques-policies/~media/D539D07128D04801BA5029F3AC170DD5.ashx>

<sup>22</sup> <https://www.pc.gc.ca/en/pn-np/nb/fundy/activ/velo-biking>

<sup>23</sup> <https://www.pc.gc.ca/en/pn-np/ab/banff/activ/velomontagne-mountainbiking>

<sup>24</sup> [https://imbacanada.com/wp-content/uploads/2018/09/Trail-Classification-System-Final-EN\\_0.pdf](https://imbacanada.com/wp-content/uploads/2018/09/Trail-Classification-System-Final-EN_0.pdf)

<sup>25</sup> <https://www.banfflakelouise.com/blog/mountain-biking-banff-and-lake-louise>

<sup>26</sup> [https://www.imba.com/sites/default/files/GQTE\\_Digital\\_Book\\_Rev\\_6.11.18\\_high\\_res.pdf](https://www.imba.com/sites/default/files/GQTE_Digital_Book_Rev_6.11.18_high_res.pdf), p. 24

- Choosing obstacle location, fall zone treatment and trail design play an important role in both user speed and limiting the consequences of a fall.
- Always add obstacles one level higher than the trail it is built in, and add proper signage (difficulty pictogram, ride-around option).
- For easy and more difficult trails, main line should be around obstacles, offered as an option.
- For difficult and expert trails, main line should use obstacle (and provide ride-around).

### Social factors

- ▶ Education:
  - ▶ Implement codes of conduct and promote them among all user groups (e.g. IMBA's Rules of the Trail).
- ▶ Community involvement:
  - ▶ Inviting representatives of the community to voice their opinions helps with community buy-in and self-regulation among user groups.
  - ▶ Consulting with members of the community when planning and designing the trail experience orients development towards meeting goals and needs.
  - ▶ Having an organized community using the trail system means more self-policing among trail users, and more people acting as ambassadors with visitors.

### SUPPORT SERVICES

The community needs to strengthen infrastructures and services in order to make the visitor experience unique and unforgettable. To achieve this level of success, IMBA and Vélo Québec recommend that operators focus on

continually developing new experiences and strengthening the following guidelines:

- ▶ Have an accessible trail network
- ▶ Be friendly and welcoming
- ▶ Provide good amenities, especially accommodation and dining options
- ▶ Be easily accessible via major highways and airports (shuttles available)
- ▶ Offer access to good local partners and guides

The following section describes the main aspects of these recommendations.

### Service and hospitality

Service and hospitality provide that something extra that can exceed visitor expectations and wow them. Knowledgeable and skilful guides, courteous and attentive staff and a welcoming community are all critical ingredients.

### Website

The mountain bike consumer is very web savvy. It is therefore important that communities have comprehensive tourism websites to convey all necessary trip-planning details to potential visitors and a web-based system for responding to inquiries in a timely manner. Information should be updated frequently and represent an accurate snapshot of what the visitor can expect. The information presented on destination websites also needs to be accessible and easy to use.

The website should be completed using traditional marketing methods to ensure proper communication of the offer among beginners.

### Maps

Trail network maps are essential. General trail area maps and trail information can be made accessible online, with more detailed maps available for purchase at local businesses and visitor information outlets.

### Trailhead facilities

Amenities for riders at the trailhead are especially important for visitors to the community. Where appropriate, washroom facilities and vehicle parking should be accommodated. Sheltered kiosks are an important consideration at main trailheads of the more extensive trail networks. They should include a welcome message, area map showing all connecting trails, riders' code of conduct or trail etiquette, and any relevant notices regarding current trail conditions, work-in-progress or trail closures. Some bike-specific amenities (wash station, tool station) should also be available to all users.

### Secure storage and bike racks

It is not uncommon for mountain bikes to be worth more than \$4,000, so naturally, riders look for a secure place to leave them while doing other things in the community. Hotel or other accommodation businesses in a bike destination area should be encouraged to provide a secure locked storage area for bikes and should promote this in their marketing material. Communities should also offer solid bike racks conveniently and visibly placed in public areas.

### Transportation

Transportation to and within a community is an important consideration for mountain bikers, particularly for international visitors and those not driving directly to a destination. Shuttle services can be a viable business and offer convenience for both tourists and local riders seeking one-way transportation to the trailhead or the top of a downhill trail. Shuttle services also enable multiple runs and the ability to ride more trails in a shorter space of time. Such services can be developed as additional offerings for bike shops, bike tours or guide companies.

Communities need to promote their rental services, if available, so potential visitors are aware that bringing their own bike is not the only option.

### Bike shops

Bike shops act as a hub for the local riding scene and visitors alike, as they are staffed by riders who know the trails and can provide visitors with the information they need. They also offer visiting bikers the option of professional repairs and servicing while they are on vacation.

Bike shops provide a social connection for riders by organizing evening group rides, training sessions and shuttle services. Many are also involved in sponsoring local mountain biking events. Good relationships and ongoing communication with local bike shops are necessary to ensure that these key stakeholders are kept engaged in the ongoing development of mountain bike facilities.

### Accommodation

There are a number of examples of accommodation providers catering to mountain bikers with extras such as secure bike storage, a bicycle repair stand and work area, a place to wash bikes, and laundry facilities. Some offer mountain bike videos for guests to watch, and provide local expertise about current trail conditions and where to ride.

### Safety and risk mitigation

Mountain biking involves a certain amount of risk, but this does not mean safety should be ignored. Risk mitigation is achieved to the best of the land manager's ability on two levels (before and after the incident) by:

#### Before

- ▶ Designing trails using best practices (IMBA standards)
- ▶ Evaluating trail difficulty using IMBA principles

- ▶ Offering ride-arounds for more engaging obstacles as part of a skill development continuum
- ▶ Installing proper signage to facilitate user decision-making and route planning
- ▶ Keeping the installations in best shape possible (maintenance planning, execution and tracking)
- ▶ Planning for the worst – defining emergency plans, including informing emergency services (police, firefighters, ambulance services, clinics and hospitals, etc.) and practising emergency situations to ensure buy-in from all stakeholders
- ▶ Sharing safety information with users

#### **After**

- ▶ Identifying causes of incidents
- ▶ Intervening to fix issue, if needed
- ▶ Evaluating emergency procedures and correcting if needed.

## **6.2 CASE STUDIES**

Several mountain bike areas have adapted their infrastructure, community and services in line with the previous best practices to be more appealing to visitors. The following table presents the trail networks of Bromont (Quebec), Kingdom Trails (Burke, Vermont) and Vallée Bras-du-Nord (Quebec) and how governance is managed in those mountain bike parks and areas.



Case	Trails and parks	Governance	Trailhead facilities	Signage, maps and website	Accommodation	Bike shops	Staff (maintenance)	Maintenance cost (annual)
Bromont (Quebec)	<p>Three different networks (municipal, private, non-profit site)</p> <p><b>Municipal trail network:</b></p> <ul style="list-style-type: none"> <li>➤ 120 km</li> <li>➤ Singletrack, cross-country and enduro, all levels</li> </ul> <p><b>Private (ski hill):</b></p> <ul style="list-style-type: none"> <li>➤ 33 trails (50 km) of downhill, flowtrail, enduro, bike park</li> </ul> <p><b>National Cycling Centre (Non-profit):</b></p> <ul style="list-style-type: none"> <li>➤ BMX Track</li> <li>➤ Dirt jump area, pump track, skills park</li> <li>➤ XC trails (4 km)</li> <li>➤ Trials area</li> </ul>	<p>Three different networks (municipal, private, non-profit site)</p> <p><b>Municipal trail network:</b></p> <ul style="list-style-type: none"> <li>➤ Municipal land purchased by the city and government for conservation, with specific uses allowed (mountain bike).</li> <li>➤ Trail stewardship and further development ensured by the city (Before: volunteer-based development of the network).</li> <li>➤ A planning strategy was elaborated, with a development master plan, maintenance and safety protocols.</li> <li>➤ Five employees (2 full-time, 3 seasonal) recruited among mountain biking local community resources (extensive formal and informal experience) + 2 students (summer job, funded by <i>Emploi Québec</i> program), coordinated by a field coordinator.</li> <li>➤ Equipment and funding provided by the city.</li> <li>➤ The local volunteer group <i>Les Amis des sentiers</i> (Friends of the Trails) is the operational task force that organizes an annual trail work day with volunteers and local partners. They receive municipal funding for maintenance, operation and entertainment. They participate in trail planning activities.</li> </ul> <p><b>Private trail network (Downhill)</b></p> <ul style="list-style-type: none"> <li>➤ Mountain Bike School with private and group lessons for beginner to experienced riders (partnership with the mountain bike day camp Dirt Camp).</li> <li>➤ Bromont National Cycling Centre offers cross-country and enduro at the Parc des Sommets.</li> </ul>	<p>Available</p> <p>Bike wash, welcome centre, washrooms</p> <p>Recommended loops for specific ability levels at private ski hill (Downhill trails)</p>	<p>Available, but 3 different sites lack integration among different partners (websites, maps).</p> <p>City's and private ski hill's websites offer information on events, weather forecasts, and trail conditions</p>	<p>Available nearby</p> <p>(Hotels, bed &amp; breakfasts, campgrounds)</p> <p>Micro-brewery nearby</p>	<p>Available On-site (ski hill, National Cycling Centre)</p> <p>Off-site (Municipal trail network)</p> <p>(All including rental – bikes and protective gear)</p>	<p>1 field coordinator (full-time)</p> <p>2 full-time staff</p> <p>3 seasonal staff (summer and winter – 10 months per year)</p> <p>2 students (full time. 3 months for peak season)</p> <p>2-5 volunteers as extra for fatbike grooming (total 20h / week)</p>	<p><b>Municipal trail network:</b></p> <ul style="list-style-type: none"> <li>➤ \$120,000 per year</li> <li>➤ Fatbike trail grooming counts for \$60,000 (4 months operations), + \$6,000 if big snowstorm</li> </ul> <p><b>Other networks:</b></p> <ul style="list-style-type: none"> <li>➤ Undisclosed</li> </ul>
Kingdom Trails (East Burke)	<p>Two trail systems: One private ski hill (Burke Mountain Bike Park) and a community trail network (Kingdom Trails Association – KTA), better known)</p> <p><b>Burke Mountain Bike Park:</b></p> <ul style="list-style-type: none"> <li>➤ 13 lift-accessible, fast-flowing downhill and technical trails (beginner to expert), connected to KTA's network at the bottom of the mountain</li> </ul> <p><b>KTA:</b></p> <ul style="list-style-type: none"> <li>➤ 82 miles (131 km) of singletrack, wide range of mountain biking experiences, signature trails, flowtrails</li> <li>➤ Jump park for expert and intermediate riders</li> <li>➤ Pump track</li> </ul>	<p>Developed on private lands, with agreements signed by landowners.</p> <p>A non-profit organization is responsible for maintenance and development.</p> <p>Big economic impact for a small community facing the decline of the forestry industry.</p>	<p>Available</p> <p>(Welcome centre with staff able to tailor a route on a highly detailed map to fit rider level, length of desired ride and/or time)</p>	<p>Interconnected network</p> <p>Websites offer information on events, weather forecasts, and trail conditions</p>	<p>Available nearby</p> <p>(Hotels, bed &amp; breakfasts, campgrounds)</p>	<p>Available on-site</p> <p>(Including rental, day and annual memberships)</p>	<p>1 field coordinator (full-time)</p> <p>10 crew members (7 for the summer season, 3 year-round)</p> <p>One volunteer trail work day per year, volunteer involvement for events organizing and hosting</p>	<p>\$30,000 USD for maintenance (\$40,000 CAD)</p> <p>2,400 man-hours on maintenance (May-Sept 2019)</p>

Case	Trails and parks	Governance	Trailhead facilities	Signage, maps and website	Accommodation	Bike shops	Staff (maintenance)	Maintenance cost (annual)
Vallée Bras-du-Nord (Saint-Raymond-de-Portneuf)	<p>105 km in total, singletrack, cross-country, enduro and flowtrail trails spread over 3 different trail systems – 2 connected (St-Raymond area), one more remote (Shanahan area, car access)</p> <p>Fat biking</p> <p>Signature trails (Neilson, Légende, Boréale) marketed on gear (biking socks, hats, t-shirts and other derivative products)</p> <p>All levels</p>	<p>Cooperative project, pulling together many local outdoor outfitters and local businesses in order to package an all-inclusive destination that can be appreciated by a wide range of visitors.</p> <p>A non-profit organization is responsible for maintenance and development: very proactive in financing the trail developments, using creative ways to tap into programs not meant for trail building (<i>En Marche</i> vocational program<sup>27</sup>).</p> <p>St-Raymond area: Private and city lands, with cross-country, flowtrail and enduro type trails for all skill levels.</p> <p>Shanahan area: Built on public land, offers cross-country, flowtrail and enduro trails for all skill levels along with other outdoor activities, in a glacier valley containing a white-water river.</p>	<p>Available</p> <p>(Multiple trailheads, bike wash, welcome centre, washrooms, bike shops)</p>	<p>Website offers information on events, weather forecasts, and trail conditions</p>	<p>Available nearby</p> <p>(Hotels, bed &amp; breakfasts)</p> <p>On-site campgrounds (rustic)</p> <p>Micro-brewery on-site (with beers associated with activities, e.g. Singletrack IPA)</p>	<p>Available on-site (both trailheads)</p> <p>(Including rentals, derived products)</p>	<p>3 full-time staff (assigned to other tasks from October to May)</p> <p>3-5 part-time staff</p> <p>Youth reintegration program (6-10 youths for 24 weeks, usually around 10 youths + 2 coordinators)</p> <p>15% of professional trail development projects allocated to trail maintenance</p>	<p>Average of \$30,000 per year</p>

<sup>27</sup> <http://www.valleebrasdunord.com/jeunesse>, accessed October 15<sup>th</sup>, 2019

## CASE STUDIES: LESSONS LEARNED

### Bromont, Quebec

The situation in Bromont is similar to Truro's in the way the Town has taken a leadership role in trail management, development and maintenance. This has allowed the Town to support the initiatives of its strong community and ensure the quality of its expansive trail network. The Town has hired staff in key positions to maintain the trails system, support community involvement, and organize private business involvement in the product development. The network expansion was backed by a strong political will emphasizing local quality of life through outdoor experiences (mountain biking being at the forefront). Bromont has seen growth in the past years (new services being developed, such as new stores, breweries, and restaurants, etc.) and has managed to lure new citizens interested in an active lifestyle.

- ▶ The Town's identity relies on the presence of the mountain resort as a 4-season economic driver. Bromont is a mountain town, being associated with mountain biking for decades (at private ski hill, host to two UCI World Cup events in 2008 and 2009). Mountain biking has recently transitioned from a local, privately operated product to a community and Town driven trail network.
- ▶ The Town's involvement was crucial for the community participation, especially for fundraising: \$8M raised for the purchase of private land to expand the network.
- ▶ Today, Town staff share their expertise with other municipal organizations for town-led development of cycling tourism.

### Kingdom Trail, East Burke, Vermont

The Kingdom Trails Association (KTA) is a good example of the benefits of a well designed, managed and promoted trail system. KTA network relies on accessible biking trails developed according to IMBA criteria, and uses events for

promotion (mostly festivals, with a few racing events). KTA is a success story: recognized by cyclists as a top destination and by planners as a powerful driver of economic diversification. KTA is a reminder for Truro to put the emphasis on quality trail experience and to keep the "by riders, for riders" ethos in its planning.

- ▶ East Burke went from a forestry-based economy to a major trail destination for mountain biking. For 25 years, the region has steadily grown to become a must-ride destination not only in Vermont, but in all of the Northeast.
- ▶ Kingdom Trails has been found to bring \$4.5 million to the Vermont economy. It has seen an impressive 18% annual growth rate since 2004. More than 80% of riders are out-of-state visitors.
- ▶ Between 2016 and 2018, the number of rider visits increased by nearly 50% from 94,000 to 137,000. In 2017, KTA took in over \$1.1 million in revenue against \$640,000 in expenses.

### Vallée Bras-du-Nord, Saint-Raymond-de-Portneuf, Quebec

Vallée Bras-du-Nord is a good example of how a community can find creative solutions to build a quality trail network from the ground up. Vallée Bras-du-Nord managed to create a strong attachment to the project and a true outdoor culture. This is felt strongly when visitors experience the trails and get a taste of the local lifestyle. This local lifestyle goes a long way towards attracting visitors looking for a special experience, which sets it apart from other trail destinations in the province. Vallée Bras-du-Nord does joint promotional efforts with nearby outdoor attractions. It emphasizes experience quality, while demonstrating the complementarity of the region's attractions. This appeals to cyclists of all abilities and interests.

- ▶ Organized as a cooperative, this 20-year-old project brings together associations, businesses and landowners. It was through a youth-based project that the first mountain bike trails of the network were built (project En Marche, recently highlighted by Rocky Mountain Bicycles Magazine). Youth groups continue to participate in network maintenance.
- ▶ Saint-Raymond was known as a snowmobile destination. The town has seen economic benefits from new visitors during the summer season. The local hotel has doubled its capacity, opening a restaurant and micro-brewery to cater to the new cycling and outdoor clientele.
- ▶ Vallée Bras-du-Nord is often cited as an example of sustainable tourism development and has been nominated for multiple awards. It has also started to gain national recognition for the quality of its mountain bike trails. Its promotional efforts include attracting international events, partnering with world-renowned trail builders, and involvement on the regional tourism board.

## 7 SWOT ANALYSIS AND CHALLENGES

This section draws on:

- The previous sections
- The workshop with the steering committee
- The consultation with partners
- The community consultation
- The site assessment



## 7.1 SWOT SUMMARY – RMBP

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>▶ Critical mass of networks</li> <li>▶ Good collaboration between the Town and volunteers</li> <li>▶ Skills park</li> <li>▶ Many easy trails</li> <li>▶ Proximity to the town centre</li> <li>▶ Strong community involvement</li> </ul>	<ul style="list-style-type: none"> <li>▶ Splintered coordination (maintenance and development)</li> <li>▶ Lack of maintenance (bike park, older trails)</li> <li>▶ Staff still searching for better specific mountain bike skills to maintain the trails</li> <li>▶ Limited services in the upper Victoria Park, like washrooms, and no rental at the mountain bike park</li> <li>▶ Weather-sensitive: oldest trails are not as well designed as the newer ones</li> <li>▶ Lack of information on trail uses: signage and directions, website</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>▶ Creation of Mountain Bike Atlantic (ACOA)</li> <li>▶ Room for development and terrain diversity</li> <li>▶ Funding available at CCH for future and existing trails</li> <li>▶ Truro location in Nova Scotia (accessibility, crossroads)</li> <li>▶ Possible integration of mountain biking in a tourist activity package</li> <li>▶ Tourism infrastructure in place (food, accommodation, etc.) opens opportunities for economic development</li> <li>▶ Truro's central location in Nova Scotia</li> <li>▶ Collaboration with other bike park's in the province to offer a multi-day experience</li> </ul>	<ul style="list-style-type: none"> <li>▶ Volunteers are tired</li> <li>▶ Limited human, physical and technical capacity (Town staff)</li> <li>▶ Other mountain bike parks and networks are currently developing and renewing their offer (e.g. McIntosh)</li> <li>▶ Mountain biking is not a priority for Tourism Nova Scotia</li> <li>▶ Potential tensions on trail sharing between mountain bikers and other users (walkers, runners) in Victoria Park</li> </ul>

## 7.2 STRATEGIC POSITIONING

There is an opportunity for the Town of Truro to develop its mountain bike offer:

- ▶ Mountain biking participation is on the rise. This has been a consistent trend over the last two decades. The adept profile is diversified and involves youth, adults and families with kids.
- ▶ There is a strong mountain bike community in Truro. It is also widely popular with local kids and youth.
- ▶ Mountain biking is a part of life in Truro and it opens up the possibility to build on this to create a destination that feels real and authentic.
- ▶ The proximity of the network to downtown Truro could make the overall destination appealing for visitors by providing a more diverse experience (culture, shopping, food and drinks, etc.)

Other mountain bike destinations in the Maritimes are investing in their network, e.g. Sugarloaf and Edmundston in New Brunswick, and Keppoch in Nova Scotia. With the recent creation of Mountain Bike Atlantic, there is a regional momentum to develop the sport as a tourist activity.

Now is the time to position Truro as a mountain bike destination.

The Railyard Mountain Bike Park is already known regionally and has a decent network of trails. Truro is not starting from scratch. In the short term, with repairs, a few trail enhancements, key additions to the network, and with some investment, the mountain bike experience can be more attractive.

But this is not enough to make it a destination that brings the most economic benefits.

In order to attract riders, the network will need to be expanded to offer a wider variety of trail

experience. This will require larger investments in time, human resources and funds.

These investments can pay off:

- ▶ Mountain biking, from British Columbia to Vermont and Quebec, has brought economic benefits to the local economies.
- ▶ It also has the potential to attract new residents interested in an active lifestyle (e.g. the case of Bromont).

The available terrain in Truro appears to be suitable for interesting trail development. Even if no downhill trails can be developed, new trails can be designed to appeal to a large share of the mountain bike market by offering a variety of trail difficulty levels and features.

**Truro is well positioned to take advantage of the regional mountain bike market: easily accessible from Halifax and other parts of Nova Scotia, New Brunswick and PEI.**

**The presence of other ride centres can be an opportunity for partnerships, especially if they have the potential to bring experiences that Truro cannot offer. Keppoch seems to be a natural partner because of its downhill experience, which complements Truro's more cross-country trail style.**

**By positioning Truro as the mountain bike destination in Nova Scotia, these partnerships will help make Truro a mountain bike hub. With its hotels, restaurants, shops and services, it is possible to make Truro the base from where visitors can explore the different ride centres around the province.**

**This is where Truro will see the most benefits from mountain biking.**

### 7.3 MAIN CHALLENGES TO ADDRESS

In order to achieve this positioning, there are challenges to be addressed.

The main challenges to address are the following:

- ▶ Trail diversity and mountain bike experience
- ▶ Funding
- ▶ Governance
- ▶ Multi-use

#### TRAIL DIVERSITY/MOUNTAIN BIKE EXPERIENCE

The lack of diversity in the trails and the mountain bike experience are two important issues for the Railyard Mountain Bike Park.

- ▶ This has a negative impact on local mountain bike riding (limited access to an activity that could improve active life in the community).
- ▶ This impacts the Railyard Mountain Bike Park's attractiveness to tourists.

This challenge can be detailed as follows:

- ▶ The difficulty ratio at the Railyard Mountain Bike Park does not fit with the ratio recommended by IMBA, which is 30%-40%-20%-10% (easy, intermediate, difficult, technical).
- ▶ The types of riding experience were addressed by the community and mountain bike experts. The mountain bike park is mostly enduro. Downhill and flowtrail experiences would be needed to improve the experience.
- ▶ The Railyard Mountain Bike Park has not invested in the creation of a signature trail (or small segments). This may also have an impact on its visibility.
- ▶ Trail designs may need improvement to offer a better mountain bike experience. This work would also be of benefit to older trails, currently lacking in technical input, and more weather sensitive.

- ▶ Maintenance of the trails and features is an issue all over the network. Training, equipment and resource availability need to be addressed.

#### FUNDING

Proper work to improve, maintain and develop mountain bike trails requires important investments that should be considered in the Master Plan. The costs considered in the Master Plan are as follows:

- ▶ **Investment costs:** Current construction costs are estimated at \$15,000 to \$30,000 per kilometre of mountain bike trail. The Town of Truro may have difficulty in finding the network investments required.
- ▶ **Operating costs:** the longer the network, the more maintenance it will require. Recurring maintenance costs and additional staff salaries may prove to be a challenge for the Town of Truro's budget.
- ▶ **Training costs:** Staff training was also identified as an issue. Staff can be trained to properly build and maintain the mountain bike trails and improve the network's resilience to weather hazards.
- ▶ **Funding sources:** Many potential partnerships could be organized between the Town of Truro and funding sources to improve investment in the Railyard Mountain Bike Park. Several sources of funding are available for mountain biking in Nova Scotia. However, this requires that the Town of Truro aligns its objectives with the donors' objectives and goals. Donors' objectives and goals mainly address accessibility, multi-use and multi-level issues.

#### GOVERNANCE

- ▶ The Railyard Mountain Bike Park was originally built by volunteers, with more involvement from the Town of Truro in the past few years.

- ▶ This volunteer effort was coordinated by a few organized groups, including bike shops, school groups (Short Track Series and volunteer program) and individual users.
- ▶ However, volunteers are showing signs of tiredness, mostly due to the lack of funding and economic means to maintain a network that has expanded greatly over the last years. In addition, initiatives are fragmented, with an impact on trail and Railyard Mountain Bike Park monitoring.
- ▶ The lack of training and splintered initiatives (lack of coordination) are also important issues for volunteers and for the assigned staff at the Town of Truro. Trail monitoring is based on users' observations and non-systematic reporting.

single use/multi-use status was never fully clarified. This has an impact on the experience of the park for all users.

## MULTI-USE

- ▶ Multi-use access is an important and complex issue for the present and future Railyard Mountain Bike Park development. Until now, the Railyard Mountain Bike Park, as part of Victoria Park, has included trails tagged as multi-use. Mountain bikers have to share the trails with other users (runners, walkers, etc.). A colour code is used to help users identify whether the trail is multi-use or bike-only.
- ▶ Multi-use access interconnects with Truro's Community Sustainability Plan (2010) and the Recreation Facilities and Open Space Master Plan (2012). These plans promote access to public spaces and active transportation, with connections in the town.
- ▶ However, the multi-use experience may not always be comfortable, either for walkers/runners or for mountain bikers (speed, expectations). During winter, fatbikers may expect to share trails with cross-country skiers and snowshoers.
- ▶ Attention may have to be paid to the information system. The colour code may not be as clear as it is intended to be. With the past informal development of the trail, its

# 8 VISION, GOALS AND OBJECTIVES

## 8.1 VISION STATEMENT

The Railyard Mountain Bike Park is a must-stop experience in Nova Scotia and in Atlantic Canada. Built and designed by and for the community, it appeals to both local residents and visitors. It serves as a local catalyst for the growth of the sport. It is a fun and safe place for all members of the family, of all ages and abilities.

## 8.2 GOALS TO SUPPORT THE VISION

The following goals were identified to achieve the vision.

### GOAL 1 - DIVERSIFY AND IMPROVE THE MOUNTAIN BIKE NETWORK

The Railyard Mountain Bike Park needs to upgrade and diversify its mountain bike network and expand its services.

In order to meet the vision statement and be attractive and accessible to all (families, experienced riders, newcomers, visitors and local riders), the difficulty level distribution among the trails will have to comply with the IMBA recommendations (30%-40%-20%-10%). This objective will be reached through the upgrading of existing trails and the building of new trails. The trail upgrading work will improve their resilience to weather events and their long-term sustainability. Older trails will be given specific attention. This upgrade also includes the possibility of using the trails in all four seasons.

Services are also key for the mountain bike experience. Support services make it easier for

users to access the park and plan their visit to Truro.

### GOAL 2 – FIND RECURRING AND DIVERSIFIED FUNDING OPTIONS

The Railyard Mountain Bike Park can take advantage of many funding options from municipal and provincial institutions as well as from private or supra-municipal key stakeholders. This means that the Railyard Mountain Bike Park development objectives also have to align with the objectives of these potential funders.

Sustainable, diversified and balanced funding options can contribute to:

- ▶ **Infrastructure improvement** at the Railyard Mountain Bike Park, on condition that these infrastructures improve security and training, widen accessibility (including specific groups: gender, etc.) and help to promote an active lifestyle. Funding is mostly provincial (CCH);
- ▶ **Tourism connections with existing attractions** (Great Trail, Cobequid Trail, other activities already packaged as Nova Scotia highlights) and the sharing of economic outcomes in tourism. Funding is local (Colchester County, Downtown Truro) or federal (Great Trail);
- ▶ **Sponsorship** (Signature Trails). Private sponsorship.

### GOAL 3 – PROMOTE AN INCLUSIVE GOVERNANCE IN PARTNERSHIP WITH THE COMMUNITY

Goal 3 is aimed at improving governance for the Railyard Mountain Bike Park. A reference community organization will be needed to centralize initiatives, to better showcase the work already done and to make the most of future developments (trail expansion and improvement, promotion, partnerships, etc.).

This associative formula has proven to be very effective (see case studies). It allows for better

connections among the various stakeholders (bike shops, volunteers, Town, etc.). It also provides better visibility, with a single reference organization associated with the Railyard Mountain Bike Park. A dedicated resource will promote, extend and contact partnerships with funders, collaborators, race organizers, other non-profit mountain bike associations, schools, sports and recreation programs, etc.

Members of this association, whether Town staff or volunteers, need proper training to meet Goal 1 (diversify and improve the mountain bike offer). They need coaching from the reference organization (Trail Flow or IMBA) to acquire the skills and techniques required to make the mountain bike network remain resilient and sustainable. The aim of Goal 3 is to train human resources to provide the best services and maintenance services, in order to offer a safe, well-designed and sustainable mountain bike network.

#### **GOAL 4 – DESIGN A FUN AND SAFE NETWORK FOR ALL**

All trails of the Railyard Mountain Bike Park are on public land. Everyone is free to access them.

In order to provide a fun and safe experience for cyclists and pedestrians, the design criteria for the trails should consider the multi-use aspect of the network.

Through signage and education, trails in the Railyard Mountain Bike Park will be either:

- ▶ Fully share-use: low velocities, large, good line-of-sights, less technical
- ▶ Mountain bike-preferred: higher speed, narrow, flow trails, more technical

## 9 ACTION PLAN

The Action Plan has been structured around short-, medium-, and long-term timelines. It defines the strategies and actions necessary to achieve the goals and objectives.



## 9.1 PROPOSED DEVELOPMENT PHASES

- ▶ Phase 1: Short-term (0-3 years) – A Park for local riders with their bikes

This phase is aimed at strengthening the existing infrastructure at the Railyard Mountain Bike Park. It targets local riders (all ages) with their bikes. Easy-to-implement and capital-light activities have been prioritized to make the most of the existing trails and the bike park. Upgrading work and specialized training for staff and volunteers will help to better prepare the expansion (Phase 2). Surveys of the current network and of the potential development zone will also help to better organize the next steps. The Town of Truro will also foster the creation of a mountain bike association in order to organize and optimize the efforts made for the Railyard Mountain Bike Park.

- ▶ Phase 2: Medium-term (3-6 years) – A regional attraction for riders of all levels

This phase is aimed at expanding the Railyard Mountain Bike Park trail network and infrastructure. It targets riders from Nova Scotia who want to explore the trails for one day on their own bikes. Families and friends, intermediate or advanced riders will be welcome and will find infrastructure appropriate to their level and needs. Intermediate trails and flow trails will be built to diversify trail styles and difficulty levels in the park. Heavy infrastructure will be financed through fundraising and partnerships with local and provincial institutions. Staff and volunteers will receive updated training. The association will develop a partnership network on the Nova Scotian scale.

- ▶ Phase 3: Long-term (6-9 years) – A must-stop destination for a mountain bike experience

This phase is aimed at developing a tourism strategy for the Railyard Mountain Bike Park. It will target beginner to expert riders, inviting them to enjoy a multi-day experience in Truro. Signature

and advanced trails will be built in new park sectors. A bike-friendly tag will be developed in Truro's businesses. A Welcome Centre will be located at the entrance to the park, with a large parking lot, amenities (washrooms, showers, etc.) and bike rentals on site. Phase 3 will rely on local, provincial and federal funding and partnerships, developed by a dedicated resource in Truro's Mountain Bike Association. Staff and volunteers will receive training on expert trail maintenance.



**Table 8 Action Plan – Railyard Mountain Bike Park**

Theme	Objective	Action		
		0-3 years – A park for local riders with their own bikes	3-6 years – A regional attraction for riders of all levels	6-9 years – A must-stop destination for advanced riders
Trail network	Diversify riding experiences and difficulty levels	<p><b>Intent:</b> Consolidate current network and plan for future developments</p> <p><b>Type of use:</b> Bike-preferred and multi-use</p> <p><b>Clientele:</b> Local (citizens, all ages and skills)</p> <p><b>Actions:</b></p> <p>Enhance and identify Trash Talkin’ and Slim Shady trails as bike-preferred and directional:</p> <ul style="list-style-type: none"> <li>➤ Add trail features</li> <li>➤ Work on trail surface to fill in some gaps between roots to enhance flow (in selected areas)</li> </ul> <p>Enhance trail surface on selected dug-in trails (e.g. Hawk)</p> <p>Build 2 new beginner trails:</p> <ul style="list-style-type: none"> <li>➤ 1 flow trail in the skills park area</li> <li>➤ 1 machine-built cross-country trail between Stacked and Trash Talkin’</li> </ul> <p>Hire professionals to perform site surveys and produce trail technical sheets</p> <p>Proceed with the identified repairs</p> <p>Survey proposed development zone and refine the design for future trail development according to the Master Plan’s vision and goals</p>	<p><b>Intent:</b> Enhance and diversify the trail experience for intermediate level riders</p> <p><b>Type of use:</b> Bike-preferred and multi-use</p> <p><b>Clientele:</b> Local (citizens, all ages and abilities) and regional (cyclists living within a 1- to 2-hour driving radius)</p> <p><b>Actions:</b></p> <p>Develop an intermediate level trail network connected to the existing network:</p> <ul style="list-style-type: none"> <li>➤ 3 directional flow trails</li> <li>➤ 2 machine-built cross-country trails</li> </ul> <p>Install basic equipment (picnic tables, tool stand) at future flow trail network hub</p> <p>Add signage to new trails, according to specs</p> <p>Add a paved pump track (all skill levels) to existing bike park to increase rider interest</p>	<p><b>Intent:</b> Enhance and diversify the trail experience for more advanced riders</p> <p><b>Type of use:</b> Bike-preferred</p> <p><b>Clientele:</b> Local (citizens, all ages and abilities), regional (cyclists living within a 2-hour driving radius) and provincial/outside riders</p> <p><b>Actions:</b></p> <p>Develop an advanced level trail network added in Phase 2, connected to intermediate level network</p> <ul style="list-style-type: none"> <li>➤ 2 bidirectional, machine-built, advanced level cross-country trails</li> <li>➤ 2 directional, machine-built, advanced level flow trails</li> </ul> <p>Add an intermediate level climbing trail to connect to existing (Phase 2) intermediate flow trails to allow for connection from another point in the trail network (providing more route planning options)</p> <p>Add signage to new trails, according to specs</p> <p>Construct a service pavilion to act as trailhead and service area</p>
	Train staff and volunteers on trail creation and maintenance	<p>Provide additional training to Town staff and volunteers (trail creation and maintenance)</p> <p>Hire TrailFlow or approach IMBA Canada to provide training</p> <p>Identify attendees among Town staff (terrain and office) and volunteers</p>	<p>Train staff and volunteers, and enhance their skills, on how to create and maintain trails, including winter trails</p> <p>Hire TrailFlow or approach IMBA Canada to provide training</p> <p>Identify new attendees among Town staff (terrain and office) and volunteers</p>	<p>Train staff and volunteers, and enhance their skills, on how to create and maintain expert trails</p> <p>Hire TrailFlow or approach IMBA Canada to provide training</p> <p>Identify new attendees among Town staff (terrain and office) and volunteers</p>
	Enhance the mountain bike experience	<p>Improve current signage equipment (add labels identifying difficulty levels to existing signage, add directional signage to facilitate route planning)</p> <p>Identify itineraries within the network based on the type of experience (e.g. scenic, first timer, adrenaline, etc.)</p> <p>Clearly mark the way to the Railyard Mountain Bike Park from the entrance in the lower Victoria Park. The chosen path should be wide to avoid conflict with pedestrians, but also direct to encourage its use over other hiking trails</p>	<p>Create an emergency plan for new trails</p> <p>Extend the signage system and trailhead facilities to newly developed trails</p>	<p>Update the emergency plan for new trails</p> <p>Extend the signage system and trailhead facilities to new sectors</p>
	Support services	Infrastructure	<p>Improve trailhead facilities</p> <p>Install more washrooms and picnic tables in the Railyard Mountain Bike Park</p> <p>At the main parking lot, build permanent (4 seasons) building with washrooms, water fountain, bike wash station, change room</p>	<p>Develop full rental options in partnership with Truro’s bike shops</p>

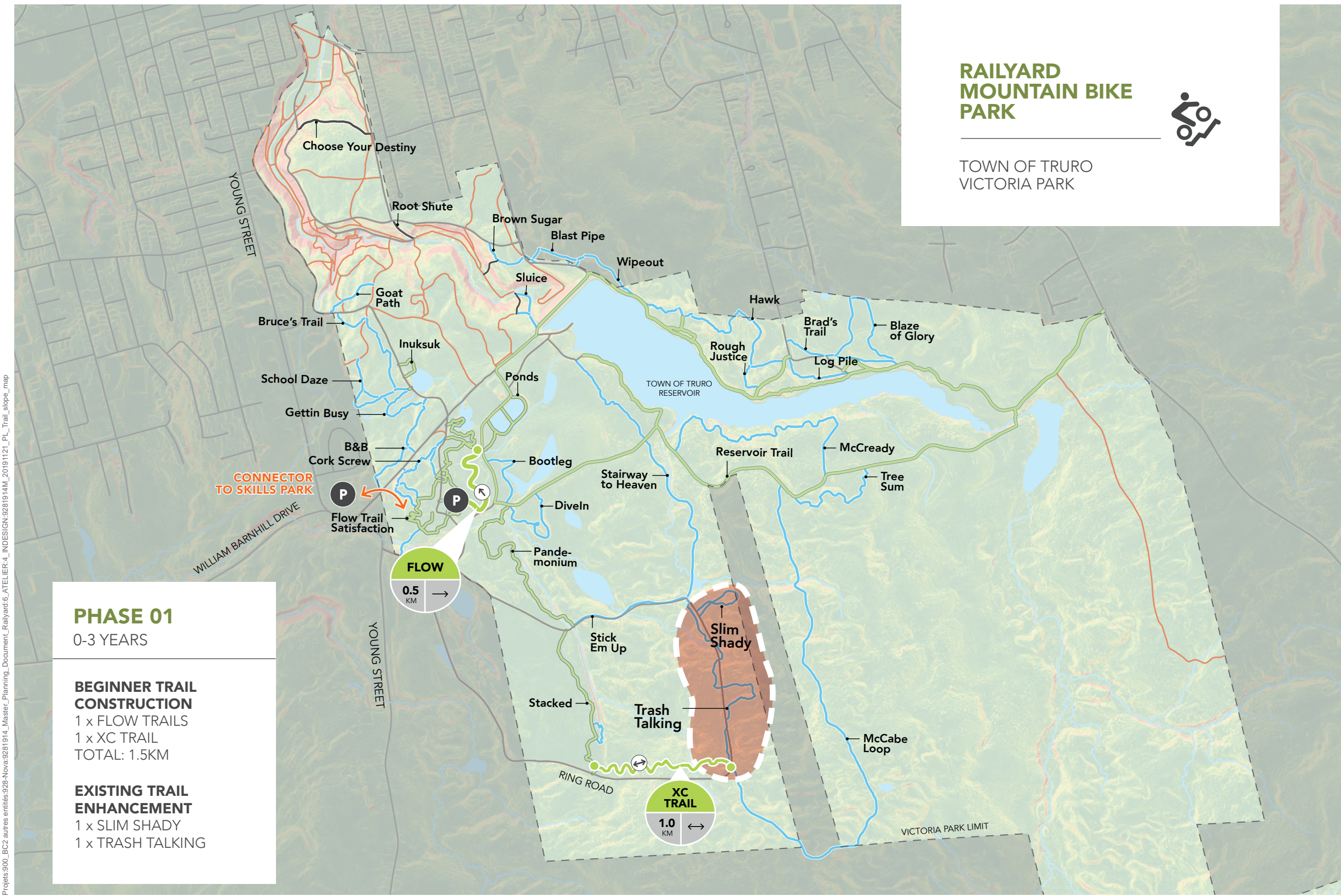
Theme	Objective	Action		
		0-3 years – A park for local riders with their own bikes	3-6 years – A regional attraction for riders of all levels	6-9 years – A must-stop destination for advanced riders
	Bike-friendly businesses	Develop a program for safe bike racks in the town	Develop transportation options (buses, car sharing with bike racks), etc.	Develop a bike-friendly tag for accommodation and restaurant businesses
	Support promotion and marketing for the Railyard Mountain Bike Park	<ul style="list-style-type: none"> <li>Pursue the dedicated website project</li> <li>Formalize social media presence</li> <li>Grow the Railyard Mountain Bike Park user database – first visitor survey</li> </ul>	<ul style="list-style-type: none"> <li>Include the Railyard Mountain Bike Park in Nova Scotia’s local promotion and marketing networks (one day, families, beginners and intermediate riders)</li> <li>Follow up on the visitor survey</li> </ul>	<ul style="list-style-type: none"> <li>Include the park into Nova Scotia’s touristic networks (Tourism Nova Scotia)</li> <li>Market Truro as an adventure town</li> <li>Follow up on the visitor survey</li> </ul>
Governance	Support the creation of a Mountain Bike Association in Truro	<ul style="list-style-type: none"> <li>Identify administrators</li> <li>Create a non-profit</li> <li>Formalize relationship with the Town of Truro (roles and responsibilities)</li> </ul>	<ul style="list-style-type: none"> <li>Develop a communication strategy for the Association</li> <li>Develop active lifestyle programs in Truro, mountain bike initiation sessions, guided tours in the Railyard Mountain Bike Park with Bicycle Nova Scotia</li> </ul>	Hire a specific resource dedicated to the development of partnerships/management
	Create extended partnerships	<ul style="list-style-type: none"> <li>Develop partnerships to promote an active lifestyle in Truro through mountain biking: <ul style="list-style-type: none"> <li>➤ Develop a mountain bike option in physical education classes</li> <li>➤ Increase participation in races</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Develop partnerships with local and provincial institutions</li> <li>Develop partnerships with specific users to improve their active lifestyle in Truro</li> <li>Develop a trail-building program with Truro Colleges</li> </ul>	Develop tourism packages with the Municipality of Colchester County, the Town of Truro and Tourism Nova Scotia – multi-activities, including mountain biking



# RAILYARD MOUNTAIN BIKE PARK



TOWN OF TRURO  
VICTORIA PARK



## PHASE 01

0-3 YEARS

### BEGINNER TRAIL CONSTRUCTION

1 x FLOW TRAILS  
1 x XC TRAIL  
TOTAL: 1.5KM

### EXISTING TRAIL ENHANCEMENT

1 x SLIM SHADY  
1 x TRASH TALKING

**FLOW**

0.5 KM →

**XC TRAIL**

1.0 KM ↔

→ DIRECTIONAL

↔ BIDIRECTIONAL

● EASY

● MORE DIFFICULT

● VERY DIFFICULT

● REST AREA

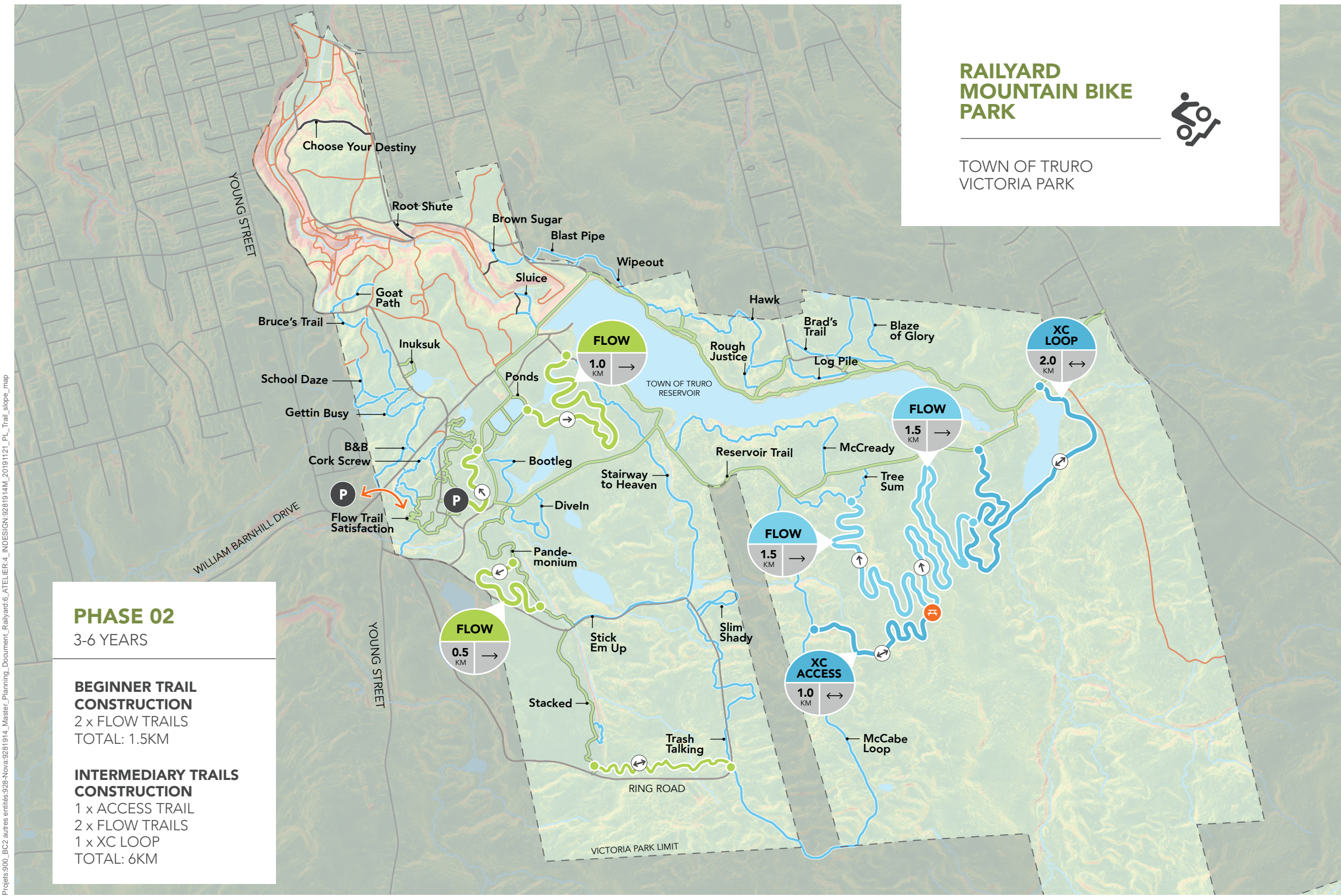




# RAILYARD MOUNTAIN BIKE PARK



TOWN OF TRURO  
VICTORIA PARK



- DIRECTIONAL
- BIDIRECTIONAL

- EASY
- MORE DIFFICULT
- VERY DIFFICULT
- REST AREA

**PHASE 02**  
3-6 YEARS

**BEGINNER TRAIL CONSTRUCTION**  
2 x FLOW TRAILS  
TOTAL: 1.5KM

**INTERMEDIARY TRAILS CONSTRUCTION**  
1 x ACCESS TRAIL  
2 x FLOW TRAILS  
1 x XC LOOP  
TOTAL: 6KM



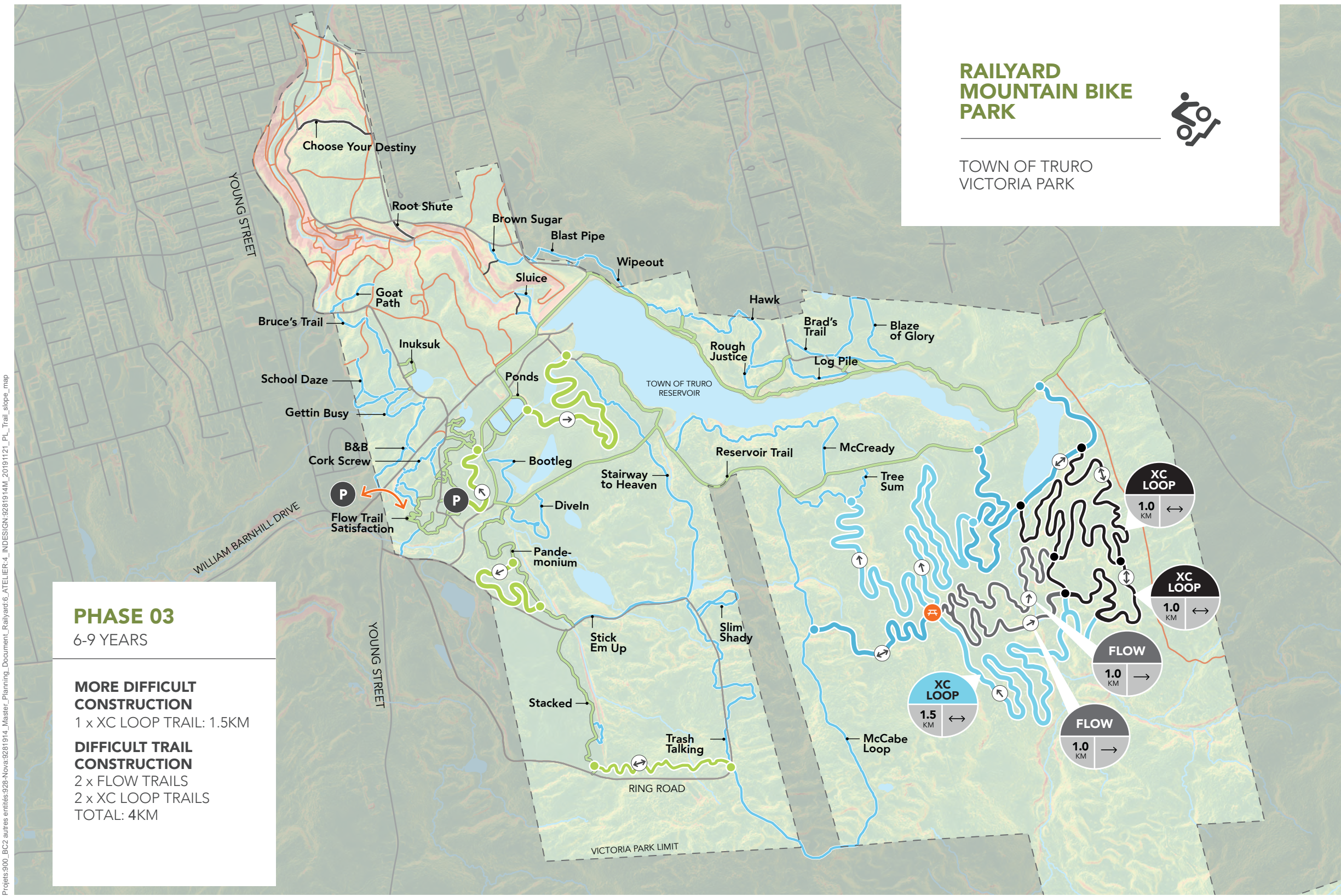
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# RAILYARD MOUNTAIN BIKE PARK



TOWN OF TRURO  
VICTORIA PARK



## PHASE 03

6-9 YEARS

### MORE DIFFICULT CONSTRUCTION

1 x XC LOOP TRAIL: 1.5KM

### DIFFICULT TRAIL CONSTRUCTION

2 x FLOW TRAILS  
2 x XC LOOP TRAILS  
TOTAL: 4KM

→ DIRECTIONAL

↔ BIDIRECTIONAL

● EASY

● MORE DIFFICULT

● VERY DIFFICULT

● REST AREA

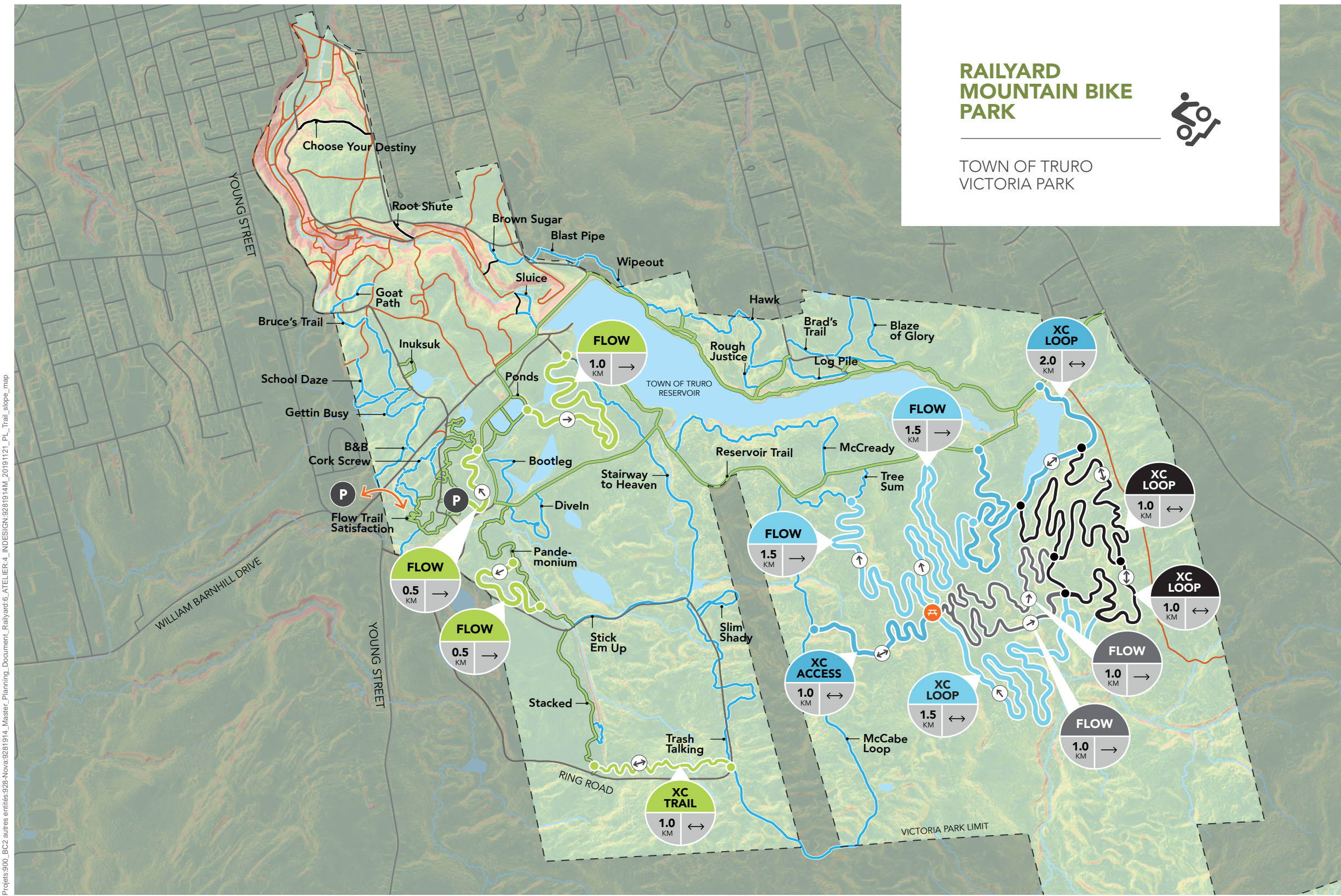




# RAILYARD MOUNTAIN BIKE PARK



TOWN OF TRURO  
VICTORIA PARK



- DIRECTIONAL
- BIDIRECTIONAL
- EASY
- MORE DIFFICULT
- VERY DIFFICULT
- REST AREA



Projets:900\_BC2 autres entités:928-Nova:9281914\_Master\_Planning\_Document\_Railyard:8\_ATELIER:4\_INDESIGN:9281914M\_20191121\_PL\_Trail\_slope\_map

## 9.2 RECOMMENDATIONS

The following recommendations support the Railyard Mountain Bike Park Action Plan. Recommendations have been organized by theme, and each section summarizes the short-, medium- and long-term actions.

The first section also presents general recommendations on how to align the Railyard Mountain Bike Park master plan with the general objectives of local, provincial and federal institutions, as well as with issues identified during meetings with the community.

### 9.2.1 General recommendations

#### MULTI-USE

The Railyard Mountain Bike Park includes multi-use trails shared by mountain bike riders and other users (walkers, runners). However, shared-use issues have also been identified.

- ▶ To maintain a safe, enjoyable and four-season use for all, it is recommended that some specific trails be designated as multi-use and others as bike-preferred:
  - ▶ Cross-country trails have been identified as compatible with multi-use, except Trash Talkin' and Slim Shady
  - ▶ Flow and unidirectional trails should be bike-preferred, with clear signage
  - ▶ In winter, the easy and more difficult network can be open to fatbikes, and the flow trail network could be designed for winter use by fatbikes

Some trails are used for cross-country skiing in winter. The main impact on mountain bike operations is the delay in opening those trails for a few weeks to allow the ground to thaw and dry.

Additional information on best practices in multi-use is also available in the "Best practices" section.

#### MAINTENANCE

Maintenance is key for the riding experience. In order to keep track of the work and investments on the network, the following maintenance management tool is proposed:

- ▶ Survey all the existing trails (on foot) to produce a series of technical sheets (one per trail):
  - ▶ General description of the trail
  - ▶ Pictures of trail conditions and features
  - ▶ Technical information: name, length, type, entrance and exit locations, list and locations of features
  - ▶ Maintenance log: survey date, locations and descriptions of deficiencies, dates and descriptions of repairs, costs of repairs
- ▶ The technical sheets will allow the maintenance team to track all repairs on the network. Trails necessitating extensive repairs on a regular basis (every year or just after every heavy rain event) should be flagged for major redesign. If a sustainable redesign is not possible, closing the trail should be considered. Over time, this tool will help to reduce the maintenance cost of the network.
- ▶ The technical sheets will be prepared in the first development phase. It is recommended that a specialized consultant be hired to produce the first version of the sheets while assessing the repairs to the trails. Estimated budget: \$25,000.

The more a trail is used, the more it will require regular maintenance. In that sense, races have a considerable impact on trail degradation. It is recommended that specific maintenance and repairs be planned on the race trails immediately after the event. A portion of the race fees could also be dedicated to trail repairs.

Every spring, a survey of the network should be conducted to open the trails, ensure their safety and update the technical sheets.

## WEATHER SENSITIVITY

Weather sensitivity has been identified as an issue for the sustainability of the trail network. In order to maintain high-quality mountain bike trails, it is recommended that Town staff and volunteers be trained on how to create and maintain the trails.

Maintenance and weather sensitivity awareness should also include an annual monitoring of trails and bike park to identify drainage issues. Drainage issues should then be corrected as soon as possible to avoid any critical damage to the network.

## OPERATIONS

The staff needed to maintain the trail network depends on the length of the network and the condition of the trails.

The longer the network, the more time it takes to survey and the more repairs will be needed. Newer and well-designed trails will require less attention.

The key employee is the network manager. This person is in charge of coordinating the maintenance of the trails. This is an employee who knows the network very well and is able to quickly identify solutions for reported problems. The network manager should be trained in trail design and maintenance.

Reporting to the network manager, a small team of Town employees will perform the maintenance and repairs of the trails. For a 40km network in good condition, a two-person team working full time is enough. This team should also be trained in trail design and maintenance. As shown in the case studies, mountain bike network operators often rely on students or part-time employees during the spring and summer months when more regular maintenance is needed.

In the short-term, the current \$10,000 maintenance budget should be maintained. With

new trail development, it should be adjusted to maintain a ratio of \$250-300 per km of trails.

However, the proposed detailed survey of the trails will provide a precise estimate of the amount needed to repair the existing network. The maintenance budget should be adjusted accordingly.

If the trail network grows to over 50km, it is suggested that a third full-time maintenance employee be added.

## VOLUNTEER INVOLVEMENT

To keep maintenance costs low, volunteers can support the maintenance operations.

A group of trained regular riders in the community can be tasked to ride around the network and report damage or issues to the network manager. A trail survey schedule can be implemented to ensure no trails are overlooked.

A community event can be organized at the beginning of the season to help the maintenance team to clean up the trails and ready them for opening.

At Kingdom Trails, such events were organized every month to help with the trail repairs during the mountain bike season. It helped them to maintain an extensive network while having a small permanent crew. As their team grew larger, the number of those events were scaled back.

The Town of Truro should reach out to the community to assess the possible level of volunteer involvement for trail maintenance.

### 9.2.2 Mountain bike trail system

Priorities for trail and network development should be focused on adding different experiences that complement the existing network.

This could be achieved by:

- ▶ Applying the IMBA and Vélo Québec recommended best practices (see “Best practices” section)
- ▶ Modifying some existing trails to make them more accessible, and converting a few specific trails (Trash Talkin’, Slim Shady) to bike-preferred for safety reasons (mostly associated with trail width and tight lines of sights)
- ▶ Adding flow trails for all skill levels to balance the trail experience (currently very technical or very easy)
- ▶ Using natural features or building Technical Trail Features (TTF) to improve rider experience, whenever possible
- ▶ Adding a separate bike-preferred area with climb trails, serving descending intermediate and advanced flow trails

Priorities for support services should be focused on complementing the existing offer with additional services to improve the visitor experience:

### 9.2.3 Funding sources

Developing Truro as a mountain biking destination will require some investments which could be difficult for the Town to fund on its own.

A funding strategy can be developed around the main clientele (locals and visitors) and the phases of the project.

The strategy could target the provincial and federal institutions programs. Communities, Culture and Heritage could be one of the main funding sources through the Trail Funding Program, Sports and Recreation Funding Program and Let’s Get Movin’ Nova Scotia.

It will require to develop a Railyard Mountain Bike Park database to identify existing visitors and focus efforts on reaching other potential visitors. Monitoring the number of visitors to the Railyard

Mountain Bike Park is also required in some funding options.

A table presenting extensive potential funding options is available in Appendix 2.

### 9.2.4 Governance

The Town of Truro will have the leadership role in the development and the operation of the network. Therefore, the Town is responsible for the implementation of this Master Plan.

Priorities for governance should be focused on acknowledging the efforts of volunteers and Town staff and on optimizing and coordinating the future development of the Railyard Mountain Bike Park.

This could be achieved by:

- ▶ Encouraging dedication to the Railyard Mountain Bike Park development (see the McIntosh Trails example in the previous sections)
- ▶ Dedicating one permanent resource to partnership development to foster connections with Nova Scotia tourism institutions
- ▶ Expanding the partnership network to Town stakeholders (funding) and potential users also targeted as high priority for the funding institutions: youth, gender and equality-concerned visitors, the elderly

The Town will still count on the help and dedication of the mountain biking community.

In the short term, the current Committee can be kept in place. This will allow for continuity in relations with the mountain biking community and other interested stakeholders.

The committee will be the base for the proposed Association. It will be in charge of community-based events, like races and work days on the trails. The Association will continue to provide

counsel to the Town staff regarding trail conditions and the mood of the mountain bike community.

It will also be a partner for the success of the trail network by supporting maintenance and operations.

The creation of the Association will formalize some of the current operating practices. A more structured organization will help to expand the base of volunteers and reduce the current pressure on key individuals.

### 9.2.5 Promotion and marketing

The mountain bike community is very present online and looks for information to plan a trip through websites and mountain bike applications.

Initially, it is recommended that the Railyard Mountain Bike Park web presence be increased and made official:

- ▶ Create an appealing website
- ▶ Create and manage dedicated social media accounts
- ▶ Continuously update Truro's page on [mtbatlantic.com](http://mtbatlantic.com)
- ▶ Create a page on [www.novascotia.com/see-do](http://www.novascotia.com/see-do)

The quality of the experience is the best sales pitch for attracting visitors to Truro. Launching large scale marketing initiatives is not proposed during Phase 1 while the network is being surveyed and enhanced.

It is a good time to start building a bank of pictures and videos showing the features and challenges of the trails. Videos are important – mountain bikers are sensitive to action and movement.

Organizing races and events offers good opportunities to showcase, through social media, the network and how it provides a place for all the family to ride.

Investments in the network are also great promotional opportunities: breaking ground on trail construction, enhancement work on existing trail, construction of a new feature, etc.

A promotional strategy that can be used when building new trails is to hire an internationally renowned trail designer. This can be done for one or two new trails in the network. World renowned trail designers have a strong online presence and very engaged social media followers. The Town will be able to promote the whole mountain bike park through the popularity of the trail designer. And in return, the trail designer will promote Truro through their own social media. It is a strategy that was used by Vallée Bras-du-Nord.

Mountain bikers are also looking to have a complete experience when they visit a destination. Promotion efforts should also focus on the ease of finding good quality accommodation, restaurants, services and bars close to the trails. Bike shops are an important asset for Truro as a mountain bike destination, because they provide sought-after services for riders: repairs, parts, gear, etc. Bike shop services should be featured in the promotional material.

This web-based promotional strategy can be completed with a paper document that can be distributed in the region's hotels, restaurants and other tourist sites. This will allow tourists passing by to be reached, who would not have thought to ride in Truro, but will consider it in the future.

### 9.2.6 Monitoring progress

This Master Plan aims to foster local participation in mountain biking and to attract visitors to Truro.

In order to monitor progress, it is recommended that surveys of Railyard Mountain Bike Park users be conducted:

- ▶ A first survey in 2020 to establish the monitoring baseline

- ▶ A survey at the end of each phase to follow the evolution of a few key indicators:
  - ▶ Number of riders
  - ▶ Rider's origin
  - ▶ Rider's characteristics: gender, age, skill level, etc.
  - ▶ Size of riding party
  - ▶ Number of days spent in Truro and accommodation type
  - ▶ Mountain bike rides per year in Truro
  - ▶ General experience satisfaction: trail conditions and maintenance, facilities, ease of finding trail heads
  - ▶ Information sources to plan trip/ride
- ▶ Based on the first survey, performance objectives can be defined for each phase.
- ▶ Reaching 10,000 visitors per year could be a preliminary objective.

The data collected can also be used to produce a complete mountain biking economic impact study. It will also allow the evolution of the local rider's profile to be tracked.

Surveys can be performed using a combination of on-trail automatic counting at key locations in the network and an in-person questionnaire.

On-trail counter results can be compared and adjusted with data from Trailforks. This will help to provide a more realistic assessment of the ridership.

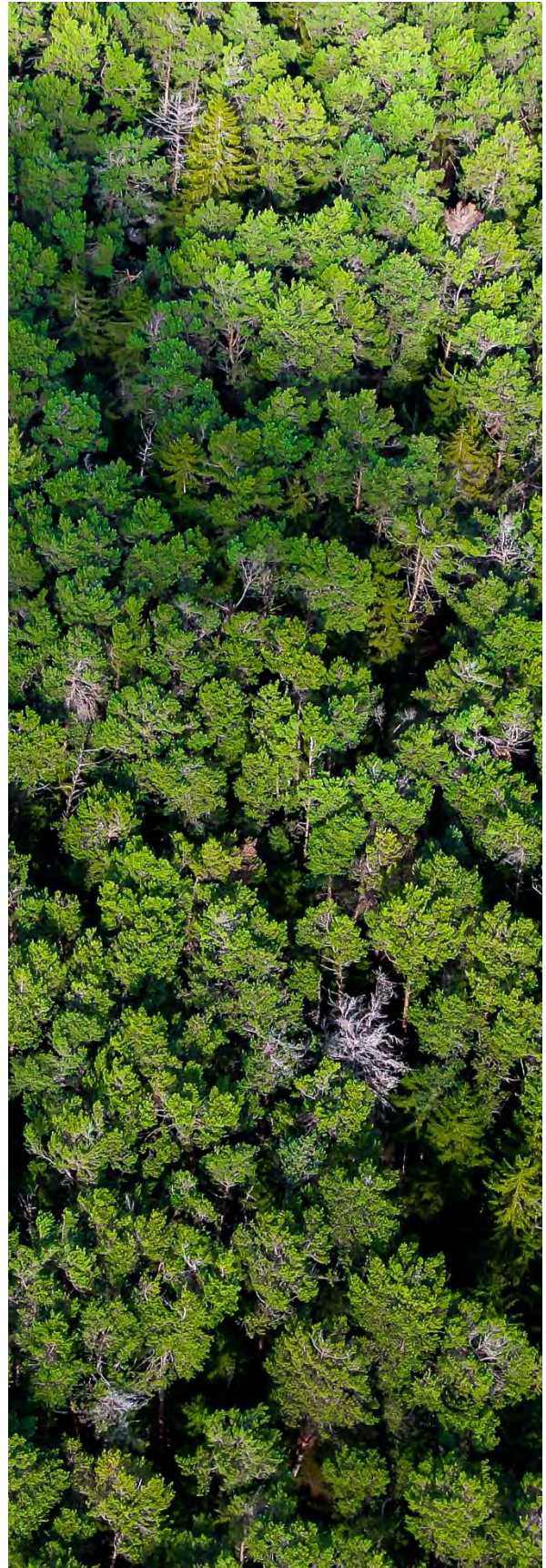
Trailforks data can be used for monthly monitoring of the trail's popularity. However, it should not be the only source of data used to assess the success of the Railyard Mountain Bike Park.

## 10 COST ESTIMATE

The following table presents the cost estimate for the following elements of the Railyard Mountain Bike Park Master Plan:

- ▶ Trail work
- ▶ Staff training
- ▶ Support services (infrastructure)
- ▶ Operations and promotion

Trail costs are based on an average construction cost of \$30,000 per km. This considers that the trails are machine-built and that the Town hires a professional contractor. Trail construction cost will vary depending on trail features and soil conditions. The proposed land surveys will allow for more precise construction estimates.



**Table 9 Cost estimate**

Item	Phase 1 (0-3 years)	Phase 2 (3-6 years)	Phase 3 (6-9 years)
<b>Training and professional services</b>			
Staff training	\$5,000	\$5,000	\$5,000
Survey of existing trails and technical sheets	\$25,000		
Planning for future developments	\$25,000		
<b>Trail construction and enhancement</b>			
Enhancement of Trash Talkin' and Slim shady trails (1.5 km)*	\$22,500		
Construction of 0.5km of easy level flow trail	\$15,000		
Construction of 1.0km of easy cross-country trail	\$30,000		
Construction of 1.5km of easy flow trails		\$45,000	
Construction of a 1km of more difficult access trail		\$30,000	
Construction of 3km of more difficult flow trail		\$90,000	
Construction of 2km of more difficult cross-country trail		\$60,000	
Construction of 2km of difficult bidirectional xc loops			\$60,000
Construction of 2km of difficult flow trails			\$60,000
Construction of 1.5km of more difficult climbing cross-country trail			\$45,000
General trail maintenance	\$30,000	\$35,000	\$40,000
<b>Skills park</b>			
Extensive skills park maintenance	\$10,000		
Construction of a paved pump track in the skills park area (beginner to advanced options, 2,000 sq. m.)		\$100,000	
<b>Signage and other services</b>			
Signage improvements (directional signage, adding difficulty levels to existing signage, signage on new trails)	\$10,000	\$5,000	\$5,000
Installation of picnic tables and tool stand (if possible) at hub on top of flow trails		\$5,000	

Item	Phase 1 (0-3 years)	Phase 2 (3-6 years)	Phase 3 (6-9 years)
<b>Communication and marketing</b>			
<b>Website</b>	\$10,000		
<b>Photography and video</b>	\$2,000	\$2,000	\$2,000
<b>Promotion</b>	\$3,000	\$6,000	\$6,000
<b>Construction of a service pavilion and parking enhancement at main entrance</b>	\$150,000**		\$150,000

\*Trail enhancement costs estimated at half construction costs

\*\*Estimate provided by the Town of Truro

**Table 10 Cost estimate summary**

Item	Phase 1 (0-3 years)	Phase 2 (3-6 years)	Phase 3 (6-9 years)
<b>Training and professional services</b>	\$55,000	\$5,000	\$5,000
<b>Trail construction and enhancement</b>	\$67,500	\$225,000	\$165,000
<b>General trail maintenance</b>	\$30,000	\$35,000	\$40,000
<b>Bike park</b>	\$10,000	\$100,000	\$0
<b>Signage and other services</b>	\$10,000	\$10,000	\$5,000
<b>Communication and marketing</b>	\$15,000	\$8,000	\$8,000
<b>Construction of a service pavilion and parking enhancement at main entrance</b>	\$150,000	\$0	\$150,000
<b>Total, per phase</b>	\$337,500	\$383,000	\$373,000
<b>Average investment per year</b>	\$112,500	\$128,000	\$124,500
<b>Total, consolidated</b>			<b>\$1,093,500</b>

ANNEX 1 PLANNING CONTEXT – REFERENCE DOCUMENTS

The following documents were read and summarized in order to better understand the context of the Railyard Mountain Bike Park. The following table presents the relevant elements for the development of the Master Plan.

Title	Content	Relevant Elements
Town of Truro (2018). <i>Victoria Park - Railyard: 5-year plan</i> , map, 1 p.	Map and description of annual works needed to complete the five-year plan: trails, washrooms, wooden boardwalk, connectors.	Major expansion works are planned for years 2 to 5 (reservoir trails, boardwalk, restoration of wet areas and bridges, south area)
CollabPlan Landscape Architecture and Planning Studio (2011). <i>Truro-Colchester Recreation and Open Space Master Plan. Implementation Budget for 10-year period</i> . 1 p.	10-year budget estimates for the Truro-Colchester Recreation and Open Space Master Plan (2011-2021)	Signage: \$5,000 per year
Brand Standards for the Railyard, 1 p.	Brand standards for the Railyard Mountain Bike Park (colours, font, motto, thumbnail)	The promotional trademark for the Railyard Mountain Bike Park
MacDonald Hatch Mott, TransActive Solutions (2009). <i>Colchester-Truro Bikeways Plan</i> . Final Report, 90 p.	<p>This document reports the results of a study on a well-connected, safe and functional Bikeways Plan for the municipalities of the County of Colchester. It had to provide a variety of safe cycling routes and an interconnected network that accommodates a wide range of activity users. The Colchester – Truro Bikeways Plan ultimate network includes trails, bikeways, parks, environmental and recreation corridors as well as designated streets working together to provide desirable alternatives for getting around Colchester-Truro.</p>	<p>The residents addressed the main following issues during the consultation: safety, key-road connections, all season biking, improved road condition (attractiveness, diversity, visibility, accessibility).</p> <p>Truro also aims at reducing urban sprawl, attract more tourists, improve the residents' health through a plan for encouraging more active transportation (AT).</p> <p>The plan may help shine the spotlight on the Railyard Bike Park facility, on the condition that it is properly integrated into the bikeway network.</p>
CBCL (2014). <i>Victoria Park Master Plan</i> . Final Report, 112 p.	<p>The first comprehensive Master Plan of Victoria Park. This master plan was born out of the multiplication of complex challenges, including increased residential development adjacent to the park, proposals for internal development and use that some may view as inconsistent with traditional park uses and values, concerns over forest fire prevention/suppression, loss of ecological integrity and diminished visitor experiences.</p> <p>The Master Plan includes a comprehensive analysis of the Victoria Park (history, geophysical, built area, uses and activities, management and governance).</p> <p>Data sheets per area detail intents, permitted uses and policies.</p>	<p>The Railyard Mountain Bike Park development must embed into Victoria Park's core values (natural environment, cultural heritage, education, health and fitness) and guiding principles (aesthetics, accessibility, safety and security, protection, promotion, and continuity).</p> <p>The Victoria Park SWOTT analysis provides a full strategic portrait with important issues for the Railyard Bike Park:</p> <p><b>Strengths:</b> Extensive and well-maintained trail network; committed and ambitious leadership; capable, dedicated and knowledgeable staff; and involved local residents.</p> <p><b>Weaknesses:</b> Poor emergency access and no formal evacuation plan, no public washroom in the Upper Park.</p> <p><b>Threats:</b> Erosion is occurring around the gorge and along the trails, and it will be difficult to replace retiring Park managers and staff.</p> <p><b>Opportunities:</b> It is possible to work with community groups to establish and regulate infrastructure for additional (and compatible) uses, such as mountain biking.</p> <p><b>Trends</b> include the rise of health, wellness and happiness as well as the creation and marketing of unique and authentic places and experiences.</p>
Town of Truro - Planning and Development Services (2010). <i>Community Sustainability Plan</i> . Final Report, 102 p.	This document details the sustainability action plan for the Town of Truro. Vision statement: Truro is a just and vibrant community with a thriving economy and sustainable environment.	<p>The three priorities set out in the plan may guide the development of the Railyard Bike Park. Mountain bike parks have been proven to revitalize and grow local economies, putting such destinations on the map. The local economic benefits and the involvement of the community will help strengthen the sustainability action plan of the Town.</p> <p>Priority 1: Stewardship of Our Natural Environment (air, water, land, energy)</p> <p>Priority 2: Pursuit of a Thriving Economy (localized, diversified, enabled, green, financed, generous)</p> <p>Priority 3: Building a Just and Vibrant Community (connected, accessible, diverse, rooted)</p>
Mountain Bike Mapping	Map of the Railyard Park bike trails	A precise and detailed map of the trails
Victoria Park Maps, 2p.	Map of the Victoria Park trails. Topographic main information.	<p>From the colour code:</p> <ul style="list-style-type: none"> <li>- Most bike trails are shared with hiking trails (multi-use)</li> <li>- Most bike trails are for beginner or intermediate mountain bikers</li> <li>- Few bike trails qualify as "advanced mountain bike trails" on the map</li> </ul>

Title	Content	Relevant Elements
Railyard Mountain Bike Park Map, 1 p.	Map of the Railyard Mountain Bike Park	Same information as before
CollabPlan Landscape Architecture and Planning Studio (2012). <i>Development Handbook. Recreation Facilities and Open Space Master Plan</i> . Final Report, 19 p.	This document describes the existing recreation facilities and open spaces in the Town of Truro. A classic typology presents regional facilities and park, neighbourhood parks, linear trails, greenways and active transportation routes. It includes policies and an implementation plan.	The Victoria Park Master Plan (2014) draws on this document as it is part of the recommended implementation plan. The document includes recommendations for the future development of Victoria Park and Railyard Mountain Bike Park, located in the Central Zone: "Desired additions to the park are based on ensuring contemporary use while conserving historic character; thus, a sustainable master plan should be developed within this context. It is important to understand that the physical sustainability of this facility is directly linked to the expansion of facility use to include contemporary activities such as cross-country skiing, orienteering and mountain biking. It is also important that new activities are in keeping with the natural aspects of the park." (p.7)
TrailFlow Outdoor Adventures (2018). <i>The Railyard Mountain Bike Park. Trail difficulty Ratings Report</i> . Final Report, 6 p.	Inspection of singletrack trails performed by TrailFlow, based on the internationally-recognized and widely-used IMBA standards. The report also provides recommendations on landscaping and hazards mitigation as well as new names for the trails that had split difficulty levels.	The inspection identified: - 17 beginner singletrack trails - 31 intermediate singletrack trails - 3 very difficult singletrack trails. Intermediate Technical Trail Features (TTF) were found on the trails (Flow Trail: Two optional sideline drops, a log ride and log pile. Start Me Up: Log ride (note that sightlines for riding this from North to South create a blind feature – the flags placed along side the log help guide users and should remain. Trash Talkin': Optional drop and log ride. Stick 'Em Up: Steep but rollable drop. Double Stacked: Entrance drop off of a rock, hole along the edge, wall ride. Stairway to Heaven: Rollercoaster bridge)
Town of Truro (2018). <i>Land Use By-law</i> . 174 p.	Land use by-law	The Railyard Mountain Bike Park is located in: <b>Public use zones - P1:</b> Cemeteries, community gardens, cultural facilities, parks, municipal campgrounds, memorial parks, picnic parks, playgrounds, recreational facilities, sports fields and courts, walkways and trails, wilderness education zones. <b>Environmental management zones - E5:</b> Forest conservation and management, passive recreation, picnic areas, public works and utilities, walkways and trails. No development permit shall be issued in the Watershed (E5) Zone for the construction of any permanent structures except those associated with Public Works or Utilities constructed by the Town of Truro. A discussion may be useful to better define the notion of "development" and "permanent infrastructure" in the environmental management zones, in order to produce an adequate Master Plan for the Railyard Mountain Bike Park.
Zoning Reference	Zone map, Town of Truro. Victoria Park is classified as P1 (Parks and Open Space) and E5 (watershed) (eastern side, Reservoir Lake watershed). The southern part of the park is classified as R9 (watershed residential) and R8 (rural residential).	Spatial representation of the uses mentioned previously.
Designation Reference	Designation map	Spatial representation of the uses mentioned previously. Victoria Park is classified as "Parks and open space" and as "Environmental" (Reservoir Lake watershed). The southern part is classified as "Rural residential."
Town of Truro Existing Land Use Map	Land use map	Same information as before. Utility (water plant) located on the southeastern part of Victoria Park.
Town of Truro Recreation Map	This map presents the main recreational facilities in Truro.	If considered, the following connections, viewpoints and camping facilities may improve the connection of the Railyard Park in the existing network and the promotion of the park's natural assets: - Wilderness walking trails (1 connection) - Bicycle/walking trails (3 connections: east, west, north) - Scenic viewpoints (3) - Recreation park facilities (north end) - Municipal campground (western end) - Forest view area (southern end)

Title	Content	Relevant Elements
Truro (2010). <i>Town of Truro Municipal Planning Strategy</i> . Final Document, 194 p.	The 2010 Town of Truro Municipal Planning Strategy seeks to be a planning and regulatory instrument for the fulfillment of the existing and complementary mission/vision statements set out in the Town's 2004 Strategic Plan and the 2010 Community Sustainability Plan.	<p>The vision:</p> <p>"The Town of Truro will provide visionary, responsible, community driven, and open-minded leadership to ensure the best possible quality of life for all" and "Truro is a just and vibrant community with a thriving economy and sustainable environment."</p> <p>The definition of an active and healthy community: Town Council recognizes the important role that good community design can have in supporting a more active and healthier lifestyle for residents. Council will encourage residential developments that facilitate walking and bicycling as an alternative to the private automobile.</p>
Railyard/Truro Nova Scotia – Pictures	64 pictures of the Railyard Mountain Bike Park	These pictures show the visual brand the Railyard Park wishes to promote among tourists, visitors and residents. The pictures also help report the condition of some of the existing facilities (trails, ability park, etc.).
Signage strategy map	This collection of document reports the organization of the signage strategy currently developed by the Town of Truro: civic addresses map (in case of emergency), entrance and wayfinding points, trailhead signs, trail marker signs.	This collection of documents will have to be completed with a physical recognition of the Railyard Bike Park, in order to understand if the signage strategy is adapted and allows to understand the Railyard Mountain Bike Park organization.

ANNEX 2 FUNDING PROGRAMS

Funding sources	Focus	Program	Amount	Keywords/Eligibility
Communities, Culture and Heritage (CCH) (Nova Scotia)	Sport and Recreation Funding Programs	Planning Assistance Program <a href="https://cch.novascotia.ca/planning-assistance-program">https://cch.novascotia.ca/planning-assistance-program</a>	Up to 50% of the total cost of the project to a maximum of \$5,000	<b>General:</b> Communities, quality of life, active life, sport and recreation, effective and integrated system of high-quality opportunities  Planning, infrastructure (signage, playground, etc.)
		Recreation Facility Development Grant <a href="https://cch.novascotia.ca/recreation-facility-development-grant">https://cch.novascotia.ca/recreation-facility-development-grant</a>	One-third of the total capital cost of the project to a maximum of \$150,000	Community groups, municipalities, not-for-profit organizations, facilities (including parks, playgrounds and trails), public participation in sport and physical recreation
		Provincial Recreation/Physical Activity Project Funding <a href="https://cch.novascotia.ca/provincial-recreationphysical-activity-project-funding">https://cch.novascotia.ca/provincial-recreationphysical-activity-project-funding</a>	Not mentioned	Shared Strategy for Advancing Recreation in Nova Scotia: Active Living, Inclusion and Access, Connecting People and Nature, Supportive Environments and Recreation Capacity  Eligible initiatives include: Program Development & Implementation, Leadership & Capacity Development, Marketing & Public Awareness, Planning & Organizational Development, Education & Knowledge Transfer & Resource Development
		Gender Equity Capacity Building Support Fund <a href="https://cch.novascotia.ca/gender-equity-capacity-building-support-fund">https://cch.novascotia.ca/gender-equity-capacity-building-support-fund</a>	Not mentioned	Sports and recreation organizations, gender equity, education and training sessions, board development workshops
	Trail Funding Programs	Community Trails Leadership Fund <a href="https://cch.novascotia.ca/sites/default/files/inline/documents/communitytrailsleadershipfund.pdf">https://cch.novascotia.ca/sites/default/files/inline/documents/communitytrailsleadershipfund.pdf</a>	Up to 50% of the overall cost of the initiative	Leaders, organizational development, capacity building for community trail groups  Eligible initiatives include: provision of training and educational opportunities for volunteers and trail professionals supporting volunteers, and acquisition of the expertise needed for specific aspects of trail projects
		Engineering Assistance Grant Program <a href="https://cch.novascotia.ca/sites/default/files/inline/documents/trailsengineeringassistance_guidelines.pdf">https://cch.novascotia.ca/sites/default/files/inline/documents/trailsengineeringassistance_guidelines.pdf</a>	Depends on need and the ability of the applicant to contribute	Safety, absence of risk to the environment, professional engineering expertise. Includes planning and design work of bridges or other large structures.
		Recreational Trail Expansion Grant Program <a href="https://cch.novascotia.ca/sites/default/files/inline/rte_2019_guidelines_final.pdf">https://cch.novascotia.ca/sites/default/files/inline/rte_2019_guidelines_final.pdf</a>	One-third of the total capital cost of a project, up to a maximum of \$150,000	Develop new trails, expand recreational trails, and do capital upgrades to existing trails
	Let's Get Moving Nova Scotia	Trail Maintenance Program <a href="https://cch.novascotia.ca/sites/default/files/inline/documents/trail_maintenance_guidelines.pdf">https://cch.novascotia.ca/sites/default/files/inline/documents/trail_maintenance_guidelines.pdf</a>	Depends on the need and the applicant's ability to contribute. The expected level of contribution by the applicant from sources other than CCH is 50%	Eligible groups include: community trail groups involved in regular and on-going maintenance on their trails, as well as emergency funding for major maintenance issues due to fire and weather-related events
		<a href="https://cch.novascotia.ca/sites/default/files/inline/documents/trail_maintenance_guidelines.pdf">https://cch.novascotia.ca/sites/default/files/inline/documents/trail_maintenance_guidelines.pdf</a>	Not mentioned	Physical activity, more accessible, less structured activities. "Live, work, study or play," education, improved access to funding, partnerships with private and public sectors
	The Great Trail (Parks Canada)	Connections to and from the Great Trail (Cobequid Trail in Truro): <a href="https://thegreattrail.ca/explore-the-map/">https://thegreattrail.ca/explore-the-map/</a>  <a href="https://thegreattrail.ca/wp-content/uploads/2018/05/10984_TCT_StrategicPlan_Deeply_Connected_EN_FINAL.pdf">https://thegreattrail.ca/wp-content/uploads/2018/05/10984_TCT_StrategicPlan_Deeply_Connected_EN_FINAL.pdf</a>	In 2018, Parks Canada revealed the \$30 million in funding for the Great Trail (over the next 4 years)	History, learn, land, communities, Canadian economic sustainability (jobs, growth, health, power of green development), safe, healthy and low-cost recreation
Truro & Colchester Chamber of Commerce	To be defined	Not mentioned	Private sector engagement in funding. Colchester Trails Strategy, AT and Sidewalk Strategy, Fundy Discovery Site, Cobequid Trail and Blue Route Provincial Cycling Network	

Downtown Truro Partnership	To be defined (Grant Thornton: <a href="https://downtowntruro.ca/business/grant-thornton/">https://downtowntruro.ca/business/grant-thornton/</a> )	Not mentioned	Marketing initiative: Truro as an adventure town, support with its in-house marketing team, visual liaison between Downtown and the park, help for the development of itineraries
Mountain Bike Atlantic	To be defined	Not mentioned	Trail counts and impact assessments
Invest Nova Scotia (Mentioned by TCPEP)	<a href="https://beta.novascotia.ca/apply-project-funding-invest-nova-scotia">https://beta.novascotia.ca/apply-project-funding-invest-nova-scotia</a>	Not mentioned	Nova Scotia's competitiveness, increased productivity, widespread benefits for a sector or industry, metrics for success, monitoring, proven leadership, financial capital and human capital, partnership.



MEMBRES



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