



LIBRO CENTRE
PHASE 1 TRAIL PROPOSAL
FEBRUARY 2023

PROPOSED TO:
The Town of Amherstburg

ORGANISED BY:
WINDSOR ESSEX BIKE COMMUNITY (WEBC)

About WEBC



What is WEBC?

Windsor Essex Bike Community (WEBC) is a newly registered nonprofit organization that advocates for the development and improvement of cycling trails in Windsor and throughout Essex County. WEBC is committed towards advocating for all types of cyclists in Essex County, while providing a platform to promote mutually beneficial partnerships between the riding community and local government.

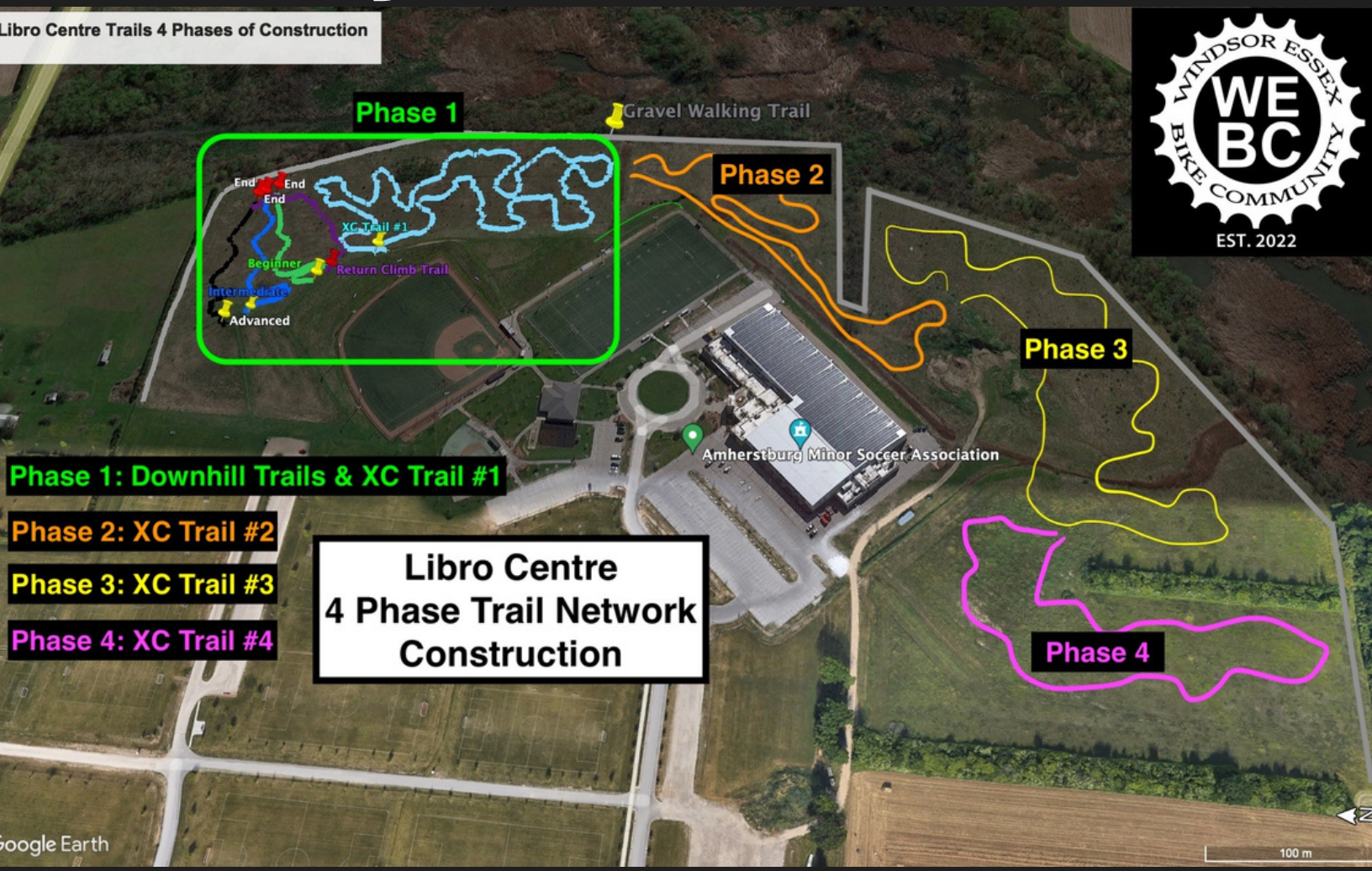
WEBC's key functions include:

- I. **Advocating** for the development of new cycling specific trails in Windsor & Essex County.
- II. **Promoting** all aspects of cycling to increase community involvement, tourism, and economic growth within the region.
- III. **Uniting** the local riding community to create mutually beneficial partnerships between riders and local government.

Overall Project Goal



Libro Centre Trails 4 Phases of Construction



- Phase 1: Downhill Trails & XC Trail #1
- Phase 2: XC Trail #2
- Phase 3: XC Trail #3
- Phase 4: XC Trail #4

**Libro Centre
4 Phase Trail Network
Construction**

Windsor Essex Bike Community proposes to develop a premier level trail network behind the Libro Centre that will provide a new and unique mountain bike experience for residents in Amherstburg and surrounding area!

WEBC envisions this project to include 4 different phases that will include the construction of three downhill oriented mountain bike trails in combination with a larger interconnecting XC trail network.

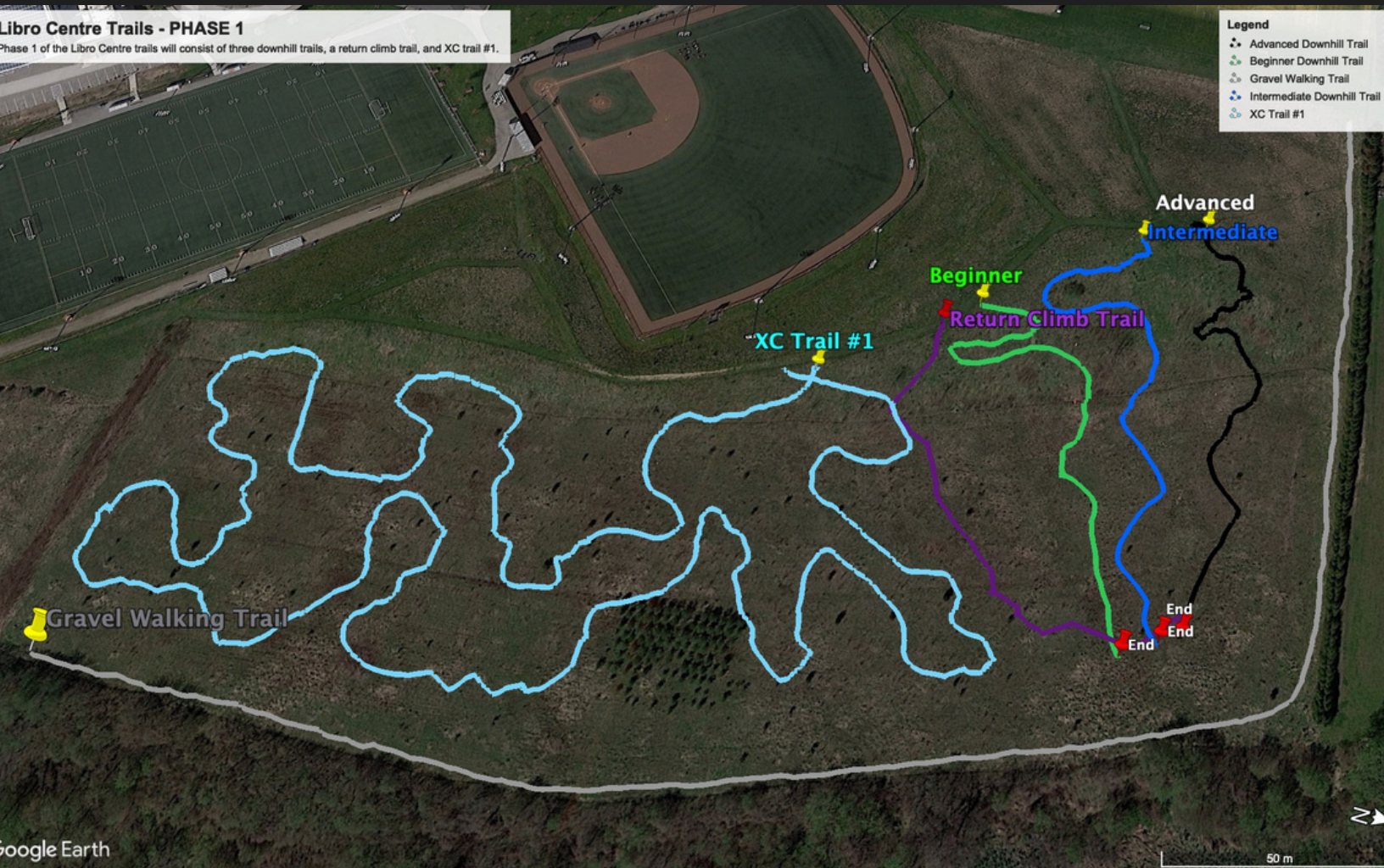
These trails will cater towards beginner to advanced riders utilizing different trail features and changing terrain.

Currently Phase 1 will be the priority, and over time WEBC will work with Amherstburg Town Council to achieve approvals for all four phases of this project!

Phase 1 Project Goal

Libro Centre Trails - PHASE 1

Phase 1 of the Libro Centre trails will consist of three downhill trails, a return climb trail, and XC trail #1.



Phase 1 Goal:

The goal of this project is to develop a mountain bike purpose trail network behind the Libro Centre in Amherstburg, Ontario. Windsor Essex Bike Community's key priority for the project will be to develop a trail network that is safe and inclusive to all ages and skill levels of riders.

These trails will be designed and constructed in a way that allow beginner to advanced riders to enjoy them. All trail plans will ensure environmental sustainability and be extremely mindful to maintaining ecological integrity. This project is multi phased, however this trail proposal will focus specifically on Phase 1 details and design. Future phases of this project will be determined based on the Libro Centre Master Plan.



Why Develop Trails?

The Windsor Essex Bike Community (WEBC) is founded on the goal of creating more cycling trails and riding zones in the City of Windsor & Essex County.

01 Personal Benefits

Developing the Libro Centre trails would create numerous personal benefits for Amherstburg residents. Such benefits would include:

- Incredible improvement of local resident's physical fitness and increased health benefits.
- More opportunity to experience exercise while being outside in nature.
- Noticeable mental health benefits through riding.
- Improved stress relief, confidence, self-esteem, pride, comradery, and overall mental well-being because of riding bikes at the Libro Centre.

02 Social & Community Benefits

The wide-ranging social benefits of developing trails at the Libro Centre would include:

- Increased opportunity for Amherstburg residents to live healthy & active lifestyles.
 - Improved awareness on environmental sustainability and appreciation for local wildlife.
 - Expanded access to an inexpensive and easily accessible space for residents to experience the wide-ranging benefits of activity in nature.
 - Large scale excitement and increased use of the Libro Centre recreation venues.
 - The creation of a safe setting for youth to explore and experience nature.
 - More social opportunities and increased volunteerism.
 - Increased social events such as volunteer trail building, community group rides, skills clinics, races, bike festivals, summer camps, ect.
 - Increased recreation opportunities for young people.
 - An additional recreation venue to utilize for local high school students for physical activity, cycling clubs, cycling races, and other team events.
-



Why Develop Trails?

03 Economic Benefits

New mountain bike trails create diverse economic development. Such positive economic impacts would include:

- Improved tourism for the Town of Amherstburg.
- Increased economic development of nearby restaurants, hotels, entertainment districts, and shopping centers.
- The development of a premier cycling destination that could host revenue generating events like cycling races, summer camps, and bike festivals.
- Development of new cycling related businesses in the Town of Amherstburg (bike shops, bike rentals, bike repair, ect.).

MTB Economic Facts

- According to the Outdoor Industry Alliance (OIA), mountain bicyclists represent approximately 3.4% of the US population, or nearly **10.6 million participants**.
 - IMBA's own research indicates that MTB enthusiasts, who represent a portion of this overall number, travel extensively within a four-hour range and will typically devote one week per year specifically to travel to reach mountain bicycling destinations.
 - **Same-day visitors spend approximately \$35 per day in local communities** while **destination visitors spend closer to \$193 per day** (due in part to lodging and increased meal purchases).
 - OAI also suggests that **60 million adult Americans ride a bike each year**, and bicycling creates major economic growth.
 - **Overall cycling contributes:**
 - \$133 billion annually to the U.S. economy
 - Supports nearly 1.1 million jobs across the U.S.
 - Produces \$53.1 billion annually in retail sales and services
 - \$6.2 billion in bicycling gear sales and services.
-



Who Are These Trails For?

WEBC promotes inclusivity!

Windsor Essex Bike Community (WEBC) is advocating for trail development that benefits the entire community.

- Trail planning will incorporate plans for beginner to expert riders, to maximize the appeal and safety new trails can have for people within the community.
- These trails will allow for more young people and new riders to adopt mountain biking.
- Trails developed at the Libro Centre can offer a safe and inexpensive outlet for young adults to learn new skills, meet new friends, and offer a productive way to spend free time.
- These Libro Centre Trails will offer families an inexpensive activity that can accommodate young or old, beginner or skilled riders for fun that can be shared together.

Ultimately, it is WEBC's goal is to have an inclusive approach, so trails can be developed for all ages & skill levels of riders.





Project Details



Windsor Essex Bike Community proposes to develop a premier level trail network behind the Libro Centre that will provide a new and unique mountain bike experience for residents in Amherstburg and surrounding area.

Phase 1 of this project will include the construction of three downhill oriented mountain bike trails in combination with a larger XC loop.

These trails will cater to beginner to advanced riders utilizing different trail features and changing terrain.





Phase 1 Project Timeline



Libro Centre Trail Phase 1 Construction Process:

- **Phase 1** of the project would be completed by the **Spring / Summer of 2023**.
 - This is a multi phased project.
 - Future phases to be determined, based on the Libro Centre Master Plan.
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PHASE 1: Trail Map

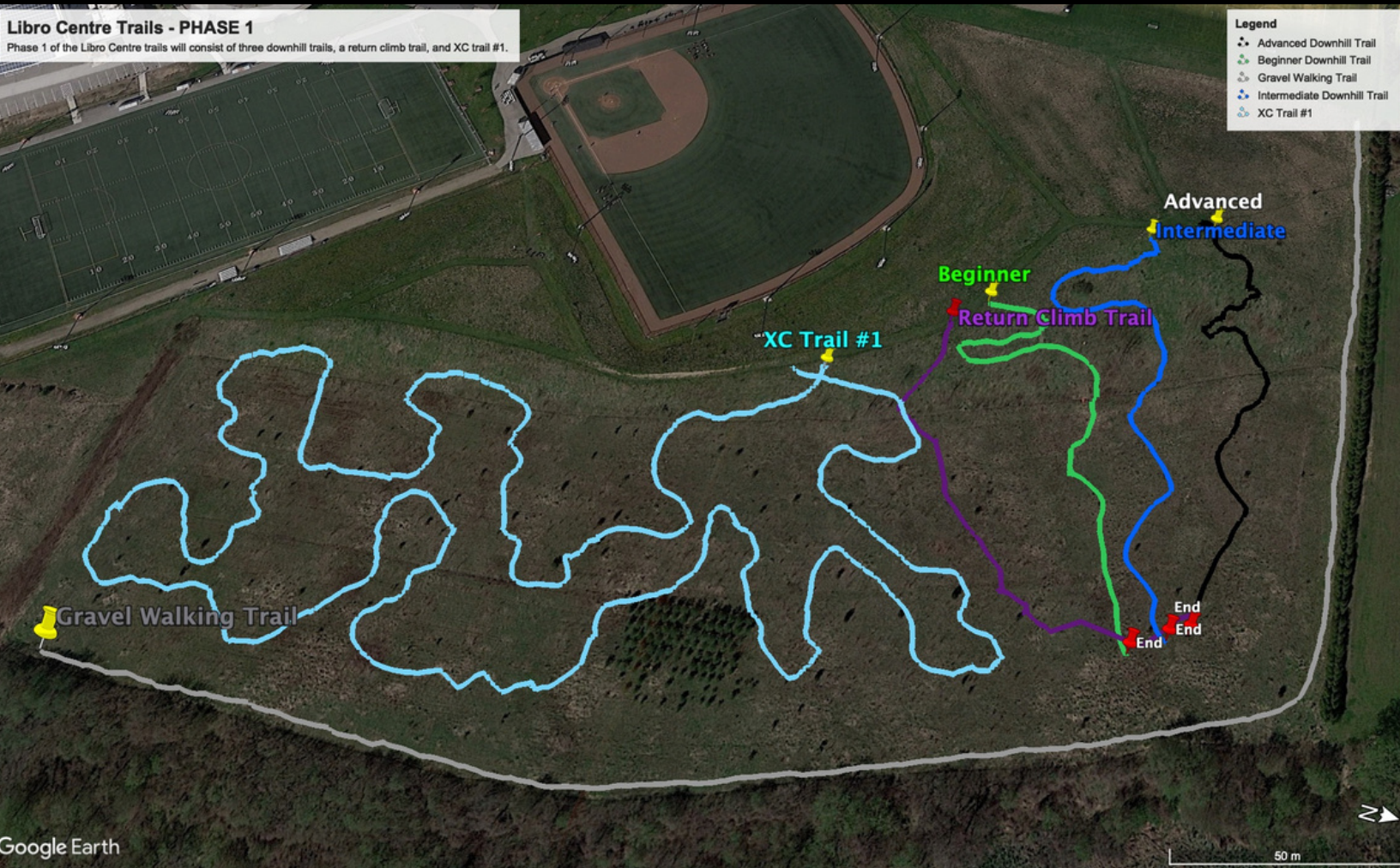


Figure 1: Shows the GPS location of the three downhill trails, return climb trail, and XC trail #1. All of these trails would be part of Phase 1 of the Libro Centre trails project.



PHASE 1: Trail Details

PHASE 1: DOWNHILL TRAILS & XC TRAIL #1



- 3 Downhill Trails, 1 Return Climb Trail, & XC Trail #1
- Beginner, Intermediate, & Advanced Downhill Trails
- XC Trail #1
- Developed for all ages & all skill levels
- Constructed by insured & experienced WEBC volunteers
- Phase 1: 1.7 km in total distance

Phase 1 will consist of:

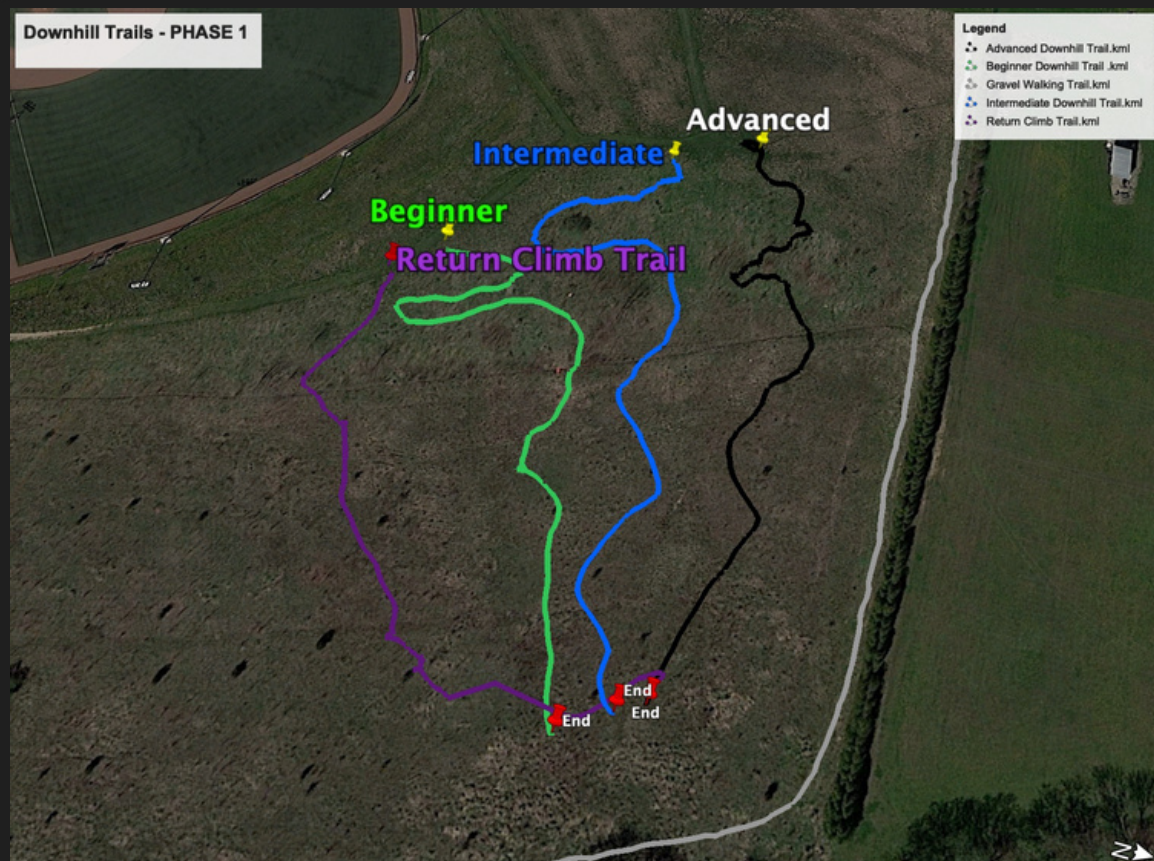
1. Construction of **3 downhill oriented trails** (beginner, intermediate, advanced).
 2. Construction of a **return climb trail**.
 3. Construction of **XC trail #1**.
- The downhill trails and return climb trail will total **0.7 km in total combined distance**.
 - The XC trail will be **1.0 km in total distance**.
 - **Phase 1** would be completed by **Spring / Summer 2023**.

All trail designs and construction will follow the IMBA (International Mountain Bike Association) standards of trail building.



DOWNHILL TRAILS

- 3 Downhill Trails + 1 Return Climb Trail
- Beginner, Intermediate, & Advanced
- Developed for all ages & all skill levels
- Constructed by insured & experienced WEBC volunteers
- 0.7 km in total distance

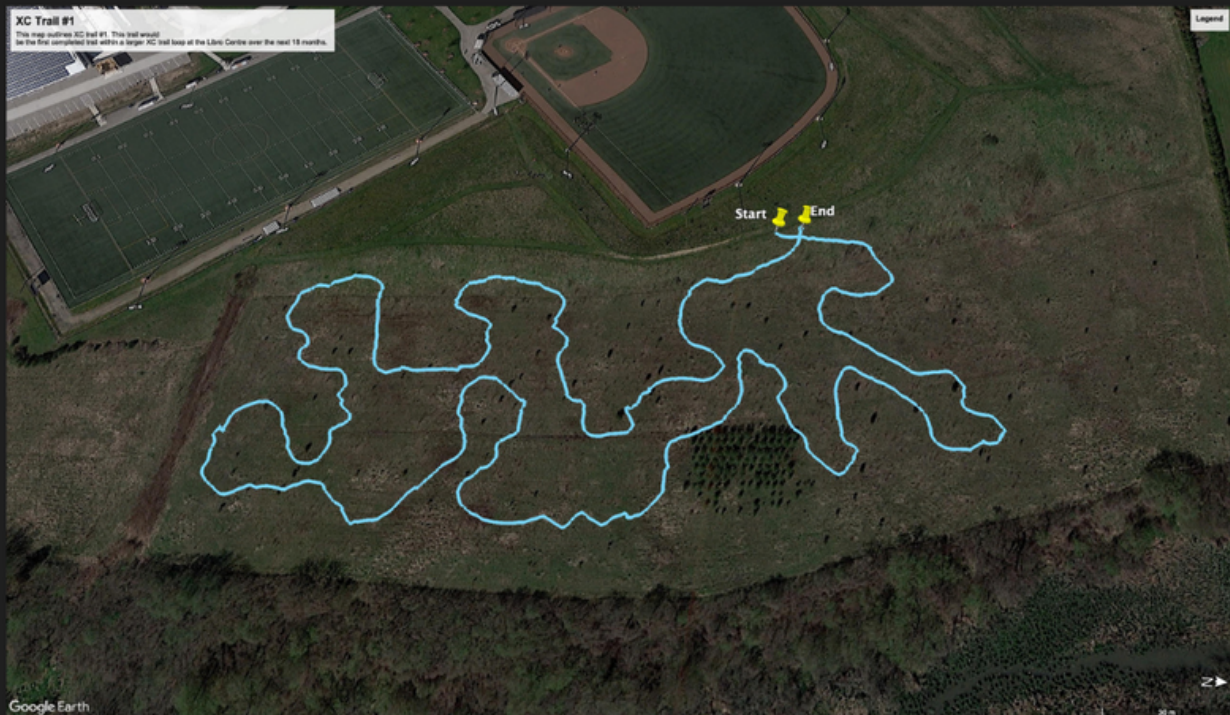


Map above shows the exact GPS mapped location of all three proposed downhill trails and return climb trail at the Libro Centre. These trails would all be constructed in Phase 1 of th Libro Centre trails project.



XC TRAIL #1

- XC trail #1 will be the first trail constructed within a larger XC trail loop proposed for the Libro Centre.
- This trail will connect to the main XC & downhill trail hub.
- Trail will be bi-directional so can be ridden in either direction on alternating days.
- All ages & all skill levels.
- **XC Trail #1:** 1.0 km in total distance



Highlights the XC trail to be built in Phase 1 of the Libro Centre trails.

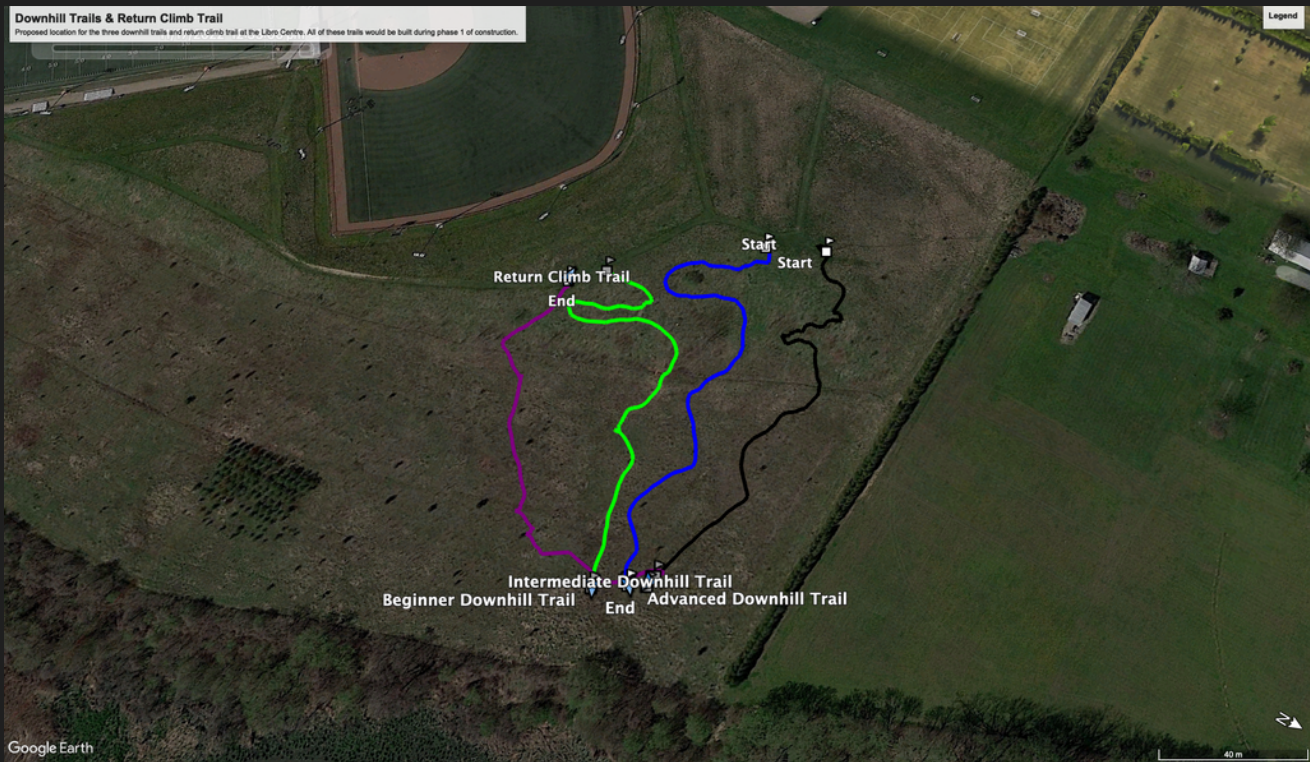


PHASE 1: GPS Trail Mapping

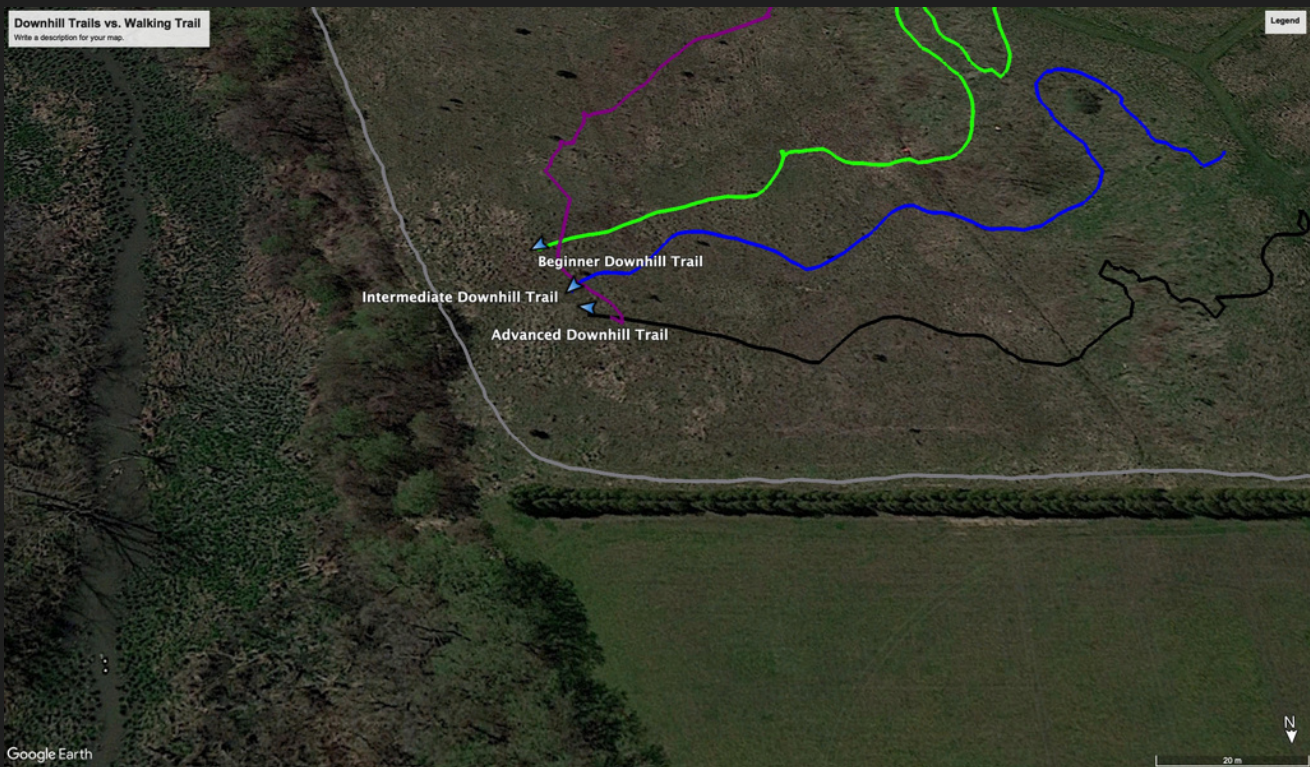


Outlines the exact GPS location of the trails to be constructed in Phase 1 on the back side of the hill at the Libro Centre.

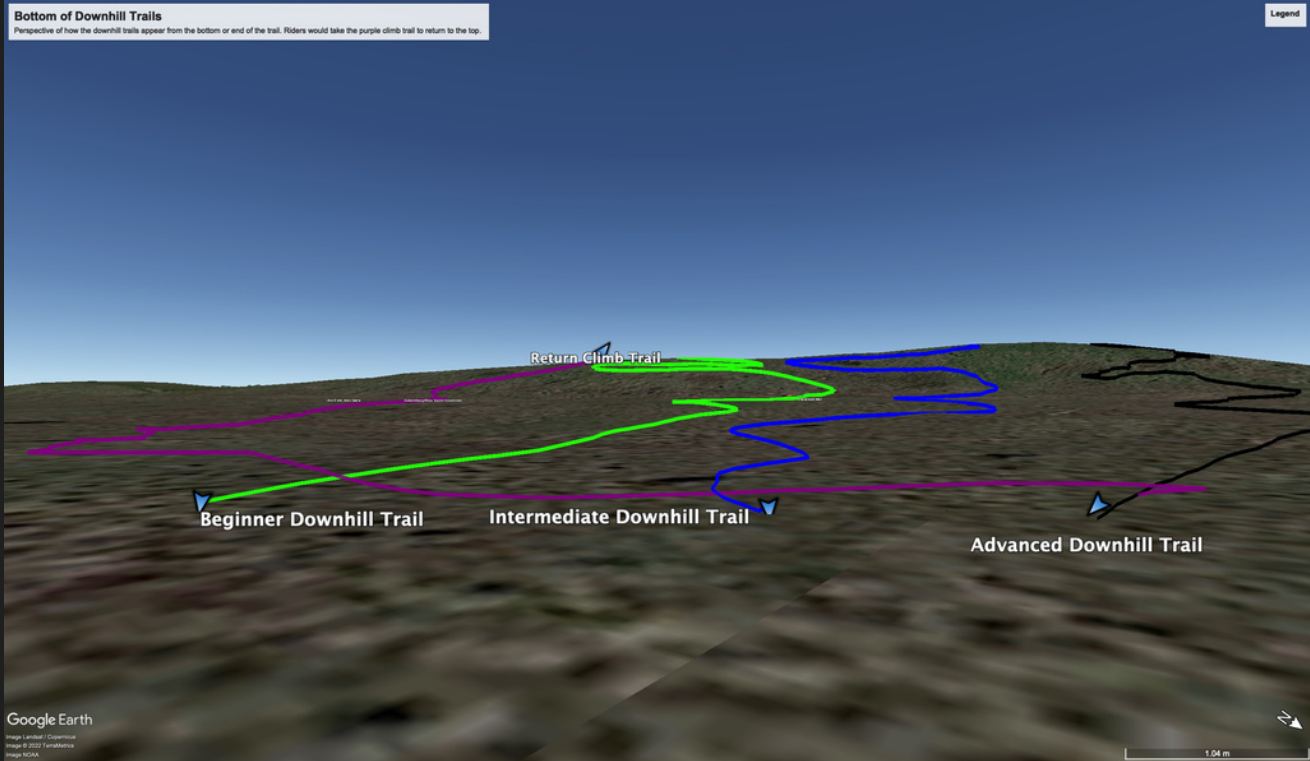




Outlines the exact GPS location of the downhill trails to be constructed in Phase 1 on the back side of the hill at the Libro Centre.

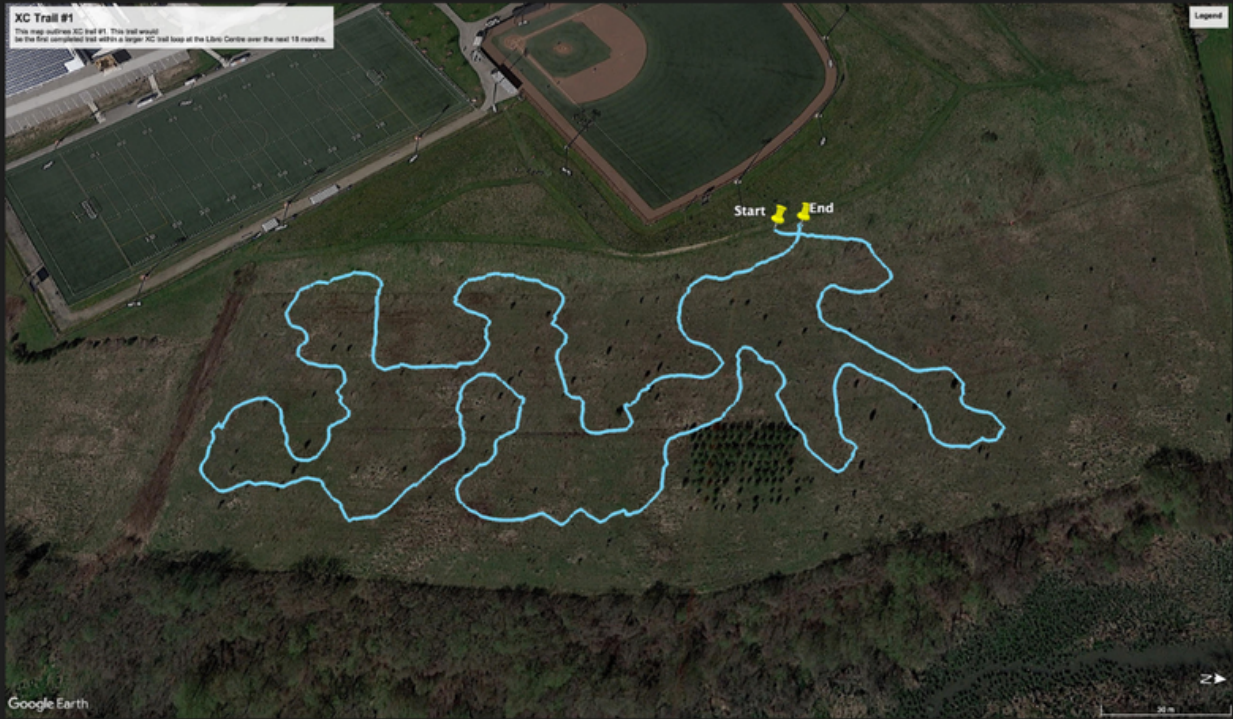


Outlines the exact GPS location of the downhill trails. Take note there is no overlap between the bike trails and recently constructed gravel walking trail.



Shows the riders perspective looking back up the hill at the end of the downhill trails. Riders would take the purple return climb trail back to the top.





Highlights the GPS location of XC trail #1 to be built in Phase 1 of the Libro Centre trail project.





PHASE 1: Trail Design

General Trail Planning Guidelines

The trail design guidelines outlined below will be utilized for the construction of the proposed Libro Centre trails. These guidelines will help ensure trails built will be environmentally sustainable while providing an enjoyable riding experience.

1. Bi-Directional Loops

Bi-directional trail loops are a series of trails that connect in a circle. These trail loops are often designed so they can be ridden in either direction. Being able to ride a trail loop in both directions creates two trails in one, by essentially doubling the trail options and features.

To increase safety, bi-directional loops also allow users to complete a loop and avoid an “out and back” which eliminates the chances of riders having a head on collision. Through clear signage, WEBC intends to alternate trail direction on opposite days, so all riders flow in the same direction while riding. Ultimately, it is WEBC’s intention to utilize the benefits of a bi-directional loop for the eventual completion of the 4 phased Libro Centre XC trail loop.



2. Progressive Trail Hubs

All trails developed at the Libro Centre will be designed with safety and skill level progression as a priority. This will be achieved by designing trails with progressive features that allow riders with different skill levels to improve gradually as they slowly move up in trail difficulty. The best way to achieve this progressive trail layout is to implement a trail hub. A trail hub is the starting point of multiple trail heads where riders have the option on which trail they want to ride, based on their skill level. A trail hub would also offer information useful for riders, including trail maps, location information, emergency contact details, and volunteer information.



The Libro Centre trail hub would act as a centrally located starting point and easily allow riders to gradually move up to more difficult trails as their skills progress. For example, a rider may begin on a beginner downhill trail, but over time move to the intermediate downhill trail as their skills improve. It is WEBC's intention to create a Libro Centre trail hub so riders can easily access and decide which trail they will ride based on their skills.

3. Develop Sustainable Trails

WEBC fully intends to develop & construct sustainable trails for the Libro Centre. This entails three key elements. Ideally a sustainable trail has as little impact on the environment as possible, resists erosion, blends with the surrounding terrain. Prioritizing these trail design elements greatly reduces the trail's ecological impact and protects native wildlife & plant species in the surrounding area of the trail. Trail design for the Libro Centre will utilize resources provided by IMBA (International Mountain Bike Association) to ensure trail sustainability. For more information on sustainable trail design, please refer to Trail Solutions: IMBA's Guide to Building Sweet Singletrack, Managing Mountain Biking: IMBA's Guide to Providing Great Riding, and Bike Parks: IMBA's Guide to New School Trails, all published by IMBA.



4. Signage

The implementation and construction of any mountain bike trails require a clearly visible system of signs. Signs are crucial to communicate key rules and guidelines between land managers and riders on the trail. A proper signage system greatly enhances the trail experience of riders, helps visitors navigate the trail network, and provides important safety information.

Signage also plays a critical role in managing potential risk and potential injury response situations. Recommended signage for the trails should be simple, clear, and located every major intersection of trail to help riders not get lost. Trail signs are also very important for communicating trail difficulty and distance to users so riders know which trail is appropriate for them to ride based on their skill level. Refer to IMBA's trail difficulty ratings below for more information.



Trail signs also communicate a lot of important information regarding trail use direction (may alternate for bi-directional loops), trail etiquette, areas of trail under construction or maintenance, or potential areas off limits to riders based on preserving environmental sustainability. It is WEBC's full intention to implement a trail map system and signage that consist of all of these important factors.






5. Design Flagging

Windsor Essex Bike Community intends to lay our trail designs using flags to ensure the Libro Centre trails are laid out properly and accurately before actual trail construction begins. The best time of year to flag the trails is late fall and winter while vegetation is minimal.



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

Outlines different trail difficulty ratings based on IMBA standards of trail building. The Libro Centre trails will follow these IMBA set standards.

PHASE 1: Project Construction

Land Stewardship Agreement

It is WEBC's intention to create a land stewardship agreement between our organization and the Town of Amherstburg. Such an agreement would allow for Windsor Essex Bike Community (WEBC) to build the Libro Centre Trails using experienced and fully insured volunteer trail builders. Under this land stewardship agreement, these trails would be constructed using WEBC volunteers, while completely under the approval of the Town of Amherstburg. All trails would be constructed entirely based upon agreed trail designs & the specified building locations shown above. Most importantly, by utilizing a land stewardship agreement, the Libro Centre would add a premier cycling trail network to their list of facilities, for a fraction of the cost of other similar recreational venues or contracted trail networks.



Land stewardship agreements have a proven track record of being an excellent opportunity for local governments and residents to work together. For example, in 2009, the development of Kitchener-Waterloo area's incredibly successful Hydrocut trail network was born out of a land stewardship agreement between the region and a local trail association like WEBC.

Since 2009, the Hydrocut has developed into a 35 km long, world class trail system, that has been completely constructed & maintained by community volunteers. It attracts over 140,000 trail users a year, creates substantial economic benefits within the community, and all without any major funding from the local municipality.



Benefits of a Land Stewardship Agreement

An established land stewardship agreement for the Libro Centre will present so many benefits:

- Reduce overall project costs due to volunteer labour and resources.
- Install Libro Centre trails at a fraction of the cost needed to build similar contracted venues or trails.
- Create long term community social and economic benefits for the Town of Amherstburg with very little upfront costs.
- Greatly reduce the future trail maintenance costs that would be performed by WEBC insured volunteers.
- Encourage community involvement.



Volunteer Maintenance Crews:

As outlined above, the adoption of a land stewardship agreement between Windsor Essex Bike Community (WEBC) and the Town of Amherstburg would allow for a fantastic opportunity to develop an incredible trail network at the Libro Centre. WEBC proposes that under the guidance of the Town & Libro Centre staff, our volunteer trail crews could also maintain the Libro Centre trails. This would create numerous benefits such as:

- Extremely low-cost trail maintenance.
- Increased safety and improved trail experience for all users.
- Increased protection for the local ecosystem and wildlife.
- More opportunity for Amherstburg residents to volunteer and help their community.
- Increased trail appeal and more overall users, that would promote all the positive social & economic impacts explained earlier in this proposal.



Built Right Bike Parks:

For the construction of the Libro Centre downhill trails, Windsor Essex Bike Community (WEBC) would also be contracting Built Right Bike Parks to help with the construction of the more technical and larger scale sections of trail.

More specifically, WEBC would utilize Built Right Bike Parks for the construction of the upper sections of the downhill trails that would require more heavy machinery equipment.

Built Right Bike Park is an excellent trail builder that does exclusive trail construction work for the Hydrocut trail network in Kitchener-Waterloo. Nick from Built Right Bike Parks and his team of trail builders come highly recommended by both Hydrocut trail organization members and riders of the Hydrocut.

WEBC is very excited to team up with Built Right Bike Parks to create a series of premier downhill trails at the Libro Centre!



General Trail Construction Guidelines

1. Construction Roles

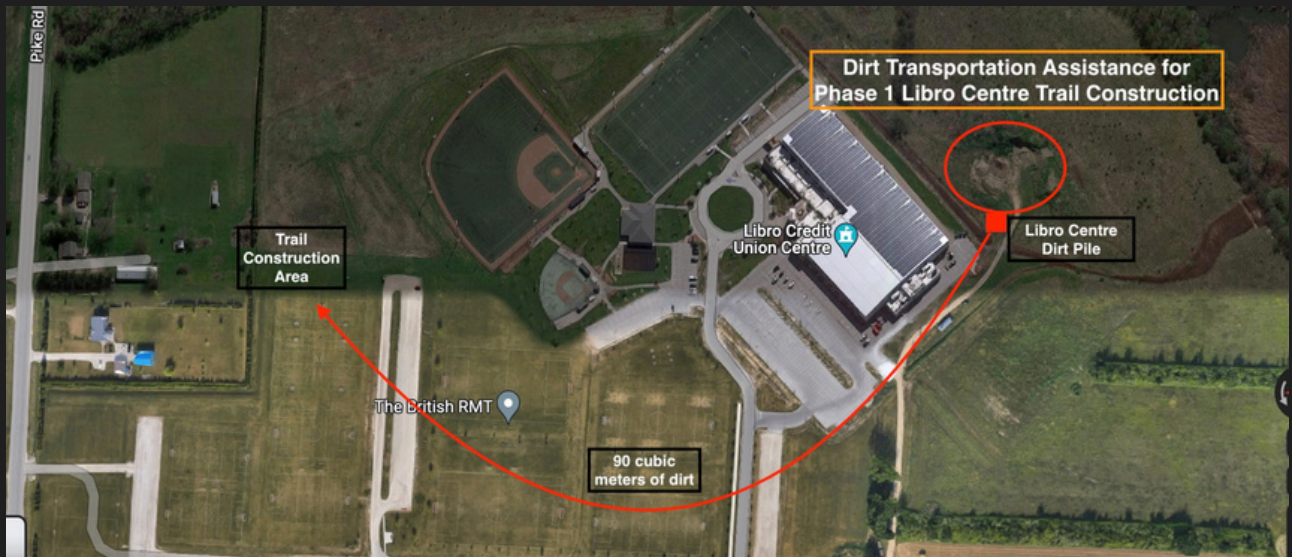
The construction of the Libro Centre trails will be carried out by a combination of skilled & experienced builders volunteering with WEBC for this project in combination with other less experienced volunteers from the community. More technical and difficult parts of the trail construction (dirt molding, feature building, and heavy equipment use) will be carried out solely by experienced trail building volunteers while more basic preparation, labour, and clean up tasks will be executed by less skilled volunteers.

2. Equipment

Most of the trail construction of the Libro Centre will be done by hand using manual hand tools. However, for moving larger amounts of dirt and resources other equipment will also be used. Such equipment could include mini-excavators, mini skid steers, tracked haulers and plate compactors. All users of this equipment will utilize proper PPE, have required certification, and will be covered under WEBC liability insurance.



PHASE 1: Town of Amherstburg Assistance



1. Libro Centre Dirt Transportation

Windsor Essex Bike Community (WEBC) will complete Phase 1 of this project almost entirely through our organization's volunteer labour and the professional consultation of Built Right Bike Parks!

However, one extremely important factor of Phase 1 construction would be having the Town of Amherstburg's assistance in transporting dirt to the trail construction site.

Approximately 90 cubic meters of dirt from the large dirt pile in the far corner of the Libro Centre would need to be transported to the Phase 1 trail construction area.

If this task could be carried out by the Town of Amherstburg or Libro Centre staff, it would expedite our trail construction process and greatly reduce heavy equipment costs needed for the project!

We hope this transporting of dirt can be coordinated for Phase 1 of this project!



PHASE 1: Project Costs



Windsor Essex Bike Community (WEBC) is so excited to work with the Town of Amherstburg through a land stewardship agreement. By using a land stewardship agreement WEBC volunteers can perform costly trail building labour at no cost to the municipality or residents.

This agreement can allow the Libro Centre to implement a premier level trail network at a fraction of the cost if it were to be a contracted constructed trail process.

Libro Centre Trail Equipment Costs

1. Libro Centre Trail Resource & Equipment Costs

Below is a list of trail resource & equipment costs needed to properly implement Phase 1 of the Libro Centre trails. We hope through financial support from potential donors & the Town of Amherstburg, that we can move forward with phase 1 of this project! Total project costs for phase 1 would be just under \$25,000.

Heavy Equipment Rental (7 Day Cost)	Price Per Week	Insurance (15%)	Delivery	Total Per Week
Trail Building Materials & Equipment				\$5,000
Mini Excavator 3000 lbs cat class	\$1,113	\$167	\$50	\$1,330
Skid Steer	\$1,210	\$182	\$50	\$1,442
Tamping Machine	\$158	\$24	\$50	\$232
Brush Cutter	\$360			\$360
Fuel	\$1,400			\$1,400
Built Right Bike Park Labour Fee				\$15,000
Total				\$24,763





Project Next Steps: Funding Options

1. OPTION #1: Donor & Grant Funding

Ideally, Windsor Essex Bike Community would prefer to fund Phase 1 project costs needed for equipment and resources using grant, sponsorship, and donor funding! This would remove any need for financial assistance from the Town of Amherstburg.

In order for that to happen, it is essential WEBC receives a **conditional approval for Phase 1 of the project**, so we can apply to grants and approach potential donors with confidence that this project will indeed move forward with their potential donations.

We ask Town Council to provide WEBC a **conditional approval for Phase 1 of this project**, stating that if our organization can raise the necessary funds needed to complete phase 1 of this project, the Town of Amherstburg will fully approve this first phase of Libro Trails construction.

2. OPTION #2: Hybrid Funding

If phase 1 of this project cannot be funded solely from grant, sponsors, and donors, WEBC hopes Town Council can support this project with the remaining funds needed to implement phase 1 of this project. WEBC will exhaust every option and utilize as many potential donors as possible to fund this project, however if unable to fund this project solely from donors, we hope Town Council will also support the project financially to implement Phase 1 construction!

As mentioned above, we hope we can receive a **conditional approval** for the project to begin fundraising, approaching donors, and applying to grants!



Project Next Steps: Summary

For WEBC to take next steps towards the implementation of Phase 1 of the Libro Centre Trails, our organization would need the following from Amherstburg Town Council:

- 1. Project Conditional Approval:** stating that if WEBC can raise the necessary funds needed to complete Phase 1 of this project, the Town of Amherstburg will fully approve this first phase of Libro Trails construction.
- 2. Approval for Brush Cutting:** in order to raise awareness and showcase where the Libro Centre trails would be to potential donors, it is very key that WEBC can do some basic brush cutting to rough in where the trails would go. All vegetation is currently dead, and therefore now is the perfect time to begin brush cutting, If the trail project did not move forward all vegetation would still grow back come the spring.
- 3. Coordinating Dirt Transportation:** one extremely important factor of Phase 1 construction would be having the Town of Amherstburg's assistance in transporting dirt to the trail construction site. We hope this can be coordinated to expedite trail construction and avoid further construction costs!
- 4. Potential Hybrid Funding:** if all funds cannot be raised from donors, sponsorship, or from grants WEBC hopes the Town of Amherstburg can offer potential financial support to make up any remaining funds needed for Phase 1 of this project!





Project Next Steps: Imagine the Possibilities!



By developing Phase 1 mountain bike trails at the Libro Centre, the Town of Amherstburg would be adding an unbelievable recreational asset to the community. For the Libro Centre, the addition of these trails would further cement it as a world class athletics center and unlike any other recreation venue in Southwestern Ontario.

Moreover, the trails would attract users from all over the region and would lead to substantial positive economic impacts and boosted tourism for the Town of Amherstburg. Most importantly, these trails would meet a huge need for a rapidly growing demand for riding areas in Windsor & Essex County. By investing into these trails, the return would see a massive growth in cycling and encourage so many more young people in our community to ride bikes. Lets work together and create something spectacular at the Libro Centre!