



UNITED RIDERS OF CUMBERLAND

BUILDER GUIDELINES

Trail Planning and Construction Guidelines

May 2020

You should be AWARE OF THE RISKS, DANGERS AND HAZARDS ASSOCIATED WITH MOUNTAIN BIKING AND TRAIL BUILDING AND MUST FREELY ACCEPT AND FULLY ASSUME ALL SUCH RISKS, DANGERS AND HAZARDS INCLUDING BUT NOT LIMITED TO PERSONAL INJURY, DEATH, PROPERTY DAMAGE AND LOSS RESULTING THEREFROM. In order to work on, maintain, manage or build a trail within the UROC area of operation you are required to sign the Trail builder's waiver of liability and risk attached to this document.

No signature means no trail work.

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SAFETY

VOLUNTEER BUILDERS ARE RESPONSIBLE FOR THEIR OWN SAFETY.
UROC membership does not include accident insurance coverage.

Always consider what your emergency response plan will be (immediate first aid, communication, and evacuation) and discuss it with your work partners. Understand that it can be very difficult to rescue someone who cannot walk from the woods and will require many people and often take several hours.

Adhering to the following guidelines is strongly recommended:

- Don't work alone. If you do work alone, ensure you have communication and a check in plan. At a minimum tell someone where you're going and when you'll be back.
- Bring a first aid kit that includes pressure dressings.
- Bring extra warm layers.
- Never operate a chainsaw when working alone and never undertake chainsaw work that you are not qualified for.
- Use appropriate personal protective equipment for the work being performed (work boots, gloves, chainsaw pants, eye and ear protection).
- Know the fire danger rating and the associated restrictions on using power tools.
- You are responsible for your own safety - make good decisions.

TRAIL PLANNING GUIDELINES



Create a consistent trail difficulty and trail character – don't fall away from the trail scope or the overall trail plan.

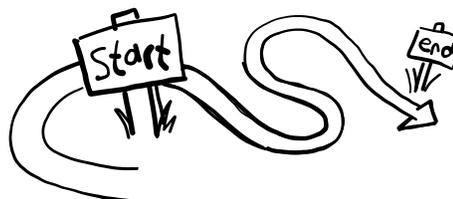
Key Planning Considerations

1. Trail Difficulty (Whistler Trail Standards) – i.e. Black Diamond or Blue Square.
2. Trail Character – i.e. XC, flow with jumps or steep and tech. Don't overly complicate the trail.
3. Trail Speed – i.e. slow to mid or mid to fast.
4. Direction of travel and trail grade.
5. How your trail fits in with the connecting trails. You should try to remain in the character and designation of the surrounding trails.

Trail Starts and Ends

Trails should have only one start point and one end point to enable easy signage and avoid mergers.

- At any finish there must be some rider/user calming measures prior to trail exit or finish.
- No features should be built at the end of the trail (e.g. no jumps onto a road).



Trail Crossings

Trails must be calmed/slowed down prior to road/trail/path crossings and the trail window and sightline must be wide open.



Trail Layout

- A properly located and designed trail will require less drainage construction and maintenance over the long term. It may not always be the easiest initial build.
- Walk the entire area of your proposed trail and identify the control points that you must avoid (cliffs, wet areas) or connect (ideal stream crossings locations, scenic points, trail features).
- Use a clinometer to determine trail grade (particularly for uphill sections). UROC can provide a clinometer and explain how to use it if necessary.
- Look for higher ground and avoid areas with standing water and/or excessive seepage. Walk the proposed line in wet weather (fall/winter/spring) and don't assume a dry zone is dry all year round.
- Avoid streamside riparian areas. Constructing trails here can increase the risk of sedimentation.
- Minimize the number of stream crossings. If a stream crossing is required, try to cross at a right angle to minimize the length of the bridge or culvert.
- Avoid paralleling streams (building in the riparian zone), which increases the risk of sedimentation.
- Avoid building trails that are constructed down the "fall line". It is best practice to observe the Half Rule: trail grade, or steepness, shouldn't exceed **half** the grade, or steepness, of the hillside; and the 10 Percent **Rule**: overall trail grade should be 10 percent or less.
- Clearly flag the final line and remove flagging from any abandoned lines.

TRAIL BUILDING GUIDELINES

The following are general trail building guidelines and do not cover every situation a trail builder may encounter. There are many resources available that you can and should access for more details including:

- UROC Executive Director and Trail Crew Staff;
- Whistler Trail Standards;
- Trail Solutions - IMBA's Guide to Building Sweet Single Tracks; and,

Line Clearing and Roughing In

- Do not start any work until the proposed line has been approved (see UROC Trail Planning and Approval Process Guide).
- Avoid felling any merchantable trees and minimize the number of living trees cut to the greatest extent possible.
- Do not open the entrance or exit of the trail. Build 40 – 50 meters in and away from beginning and end of the proposed trail. Opening up the trail is the last job you do in the build. We do not want general public riding an unfinished trail especially while you are trying to build and have tools on site.
- Danger trees or dead trees or hung up trees must be cleared by approved / qualified chainsaw users. UROC has the resources to resolve this for you.
- All brush clearing must be widely dispersed
- Fall zones – remove all sharp, sticking up, skin tearing, dangerous objects within the trail window.
- No machine use allowed, hand digs only. Applications for machine use are long and extensive (and very expensive), we aim to build single track mountain bike trails.
- Don't change water courses.

Trees

- Tree felling outside of the approved line is not allowed in the land access agreement.
- Prune trees using a pruning saw at the edge of the branch collar. Do not leave large branch stubs - stubs are a skin tearing hazards for riders.

Creating the Line

- Grub and strip organics before moving mineral soil. There should be no organics in the trail tread.
- Trail windows – clear 4ft left / 8ft up / 4ft right
- Trail tread – minimum 1.5ft. (Refer to Whistler Trail standards).
- Ensure the built grade matches the planned design grade (particularly for uphill sections).
- Create sightlines – they may vary based on the trail speed and corners but be aware that the better the sightlines the better the riding experience. Create even better sight lines leading up to and after a feature or a jump
- Clear all potential Fall zones of anomalies and sharp body hurting objects.

Drainage Work

- Ensure enough drainage (trail out sloping, ditching, cross ditches, culverts, and/or bridges) to maintain natural drainage patterns.
- Drainage can be complicated. Refer to Whistler trail standards or IMBA's Trail Solutions - Building Sweet Single Track. Or seek advice and help from UROC.
- Runoff channels – make them wide, deep, long and easy to maintain. They will fill in with organic material over time.
- Culverts are available by request and can be planned during the trail application process.

Woodwork and Creek Crossings

- Seek advice and/or help from UROC if you are unsure about any aspect of woodwork construction.
- UROC does not encourage wooden structures for long term maintenance reasons. Wood features, boardwalk, bridges and rollovers should be kept to a minimum.
- Any major creek crossing (over 20'/6m) requires an engineered design. Please avoid planning significant creek crossings.
- Bridge height to width ratio must be consistent with the trail difficulty rating and have:
 - sill logs outside of the wetted perimeter;
 - adequately sized stringers;
 - correct spacing of decking;
 - correct overhang (5cm from outside stringers); and,
 - type and size of fasteners (nails, lag bolts or other).
- No riding with the grain woodwork features in builds

Features

- Ride arounds (or walk arounds) – every feature should have some sort of other way around where feasible.
- Build realistic features to the trail designation and trail character (i.e. If you are building a blue square trail do not put in a black diamond feature etc.)

Deviating off the Line

- You have a deviation allowance in the build window on either side of the original approved GPS line. Don't go crazy, but if there is an unforeseen problem that mean you need to move your planned route, give UROC a shout and we'll work something out. The exception to this rule is where landowner boundaries occur.
- Contact UROC when more than 30m

Materials and Costs

- Culverts are available by request. Culvert diameter can be sized based on the type of crossing (stream, unclassified drainage, cross drain etc).
- Cedar may be salvaged from within the trail corridor.
- UROC can help you source material and may be able to reimburse expenses. Check with the ED prior to purchasing supplies if you would like to be reimbursed.

Final Build Stages

- Working with the builder, the UROC ED will help decide when the trail build is complete. All liability measures and build safety measures must be complete before a trail is deemed open or publicly rideable. Do not announce your trail open on social media or ask the general public to come and ride it before UROC has authorised the trail open for use.
- It is recommended that the builder and immediate build helpers ride the trail and make sure every aspect of the trail is makeable, roll-able and well built within the designation, scope and character of the build. Then UROC will assess the trail.
- Building clean-up is required once the trail build is complete. Reduce the build impact on the visual experience and the ecology of the zone and on the forest environments. Fill in the gold pits, remove and spread out all the piled-up organics and cut branches, remove flagging and any garbage that may have been missed.

Upon UROC Approval to Open the Trail

- Then you can open the entrance and open exit of the trail
- No features may be built on the exit section and rider calming measures must be taken when the exit merges with roads, other trails or carriage ways.
- UROC will provide signage and apply the trail to trail forks
- Do not announce the trail open on any media platforms until this process has happened.

THE TRAIL IS OPENED AND THE GENERAL PUBLIC CAN RIDE THE TRAIL

Ride On!



UNITED RIDERS OF CUMBERLAND

BUILDER GUIDELINES

Planning and Building – May 2020

UNITED RIDERS OF CUMBERLAND ASSOCIATION

**RELEASE OF LIABILITY, WAIVER OF CLAIMS,
ASSUMPTION OF RISKS AND INDEMNITY AGREEMENT**

(hereinafter referred to as the "Release Agreement")

**BY SIGNING THIS DOCUMENT YOU WILL WAIVE OR GIVE UP CERTAIN LEGAL RIGHTS,
INCLUDING THE RIGHT TO SUE OR CLAIM COMPENSATION FOLLOWING AN ACCIDENT**

PLEASE READ CAREFULLY!

SIGNATURE OF PARTICIPANT

Name	Last	First	Middle Initial
Address	Street		
	City	Prov./State	Postal/ZipCode

TO: United Riders of Cumberland Association, Timberwest Forest Company, Mosaic Forest Management Corp., Hancock/Comox Timber Ltd., the Corporation of the Village of Cumberland, and all owners or occupiers of premises where Trail Building Activities (as defined herein) take place, and their respective directors, officers, employees, members, volunteers, instructors, guides, agents, representatives, independent contractors, subcontractors, suppliers, sponsors, successors and assigns (all of whom are hereinafter collectively referred as "the Releasees")

I am of the full age of 19 years or am the parent/legal guardian having full legal responsibility for decisions regarding my minor child/ward under the age of 19 and I HAVE READ AND UNDERSTOOD THIS RELEASE AGREEMENT PRIOR TO SIGNING IT, and I am aware that by signing this Release Agreement, I am irrevocably and forever waiving certain legal rights which I or my invitees, heirs, next-of-kin, executors, administrators and assigns may have against the Releasees.

DEFINITION

In this Release Agreement the term "Trail Building Activities" shall include all activities, services and use of facilities whether or not provided by or arranged by the Releasees, including, but not limited to: orientation and instruction sessions or workshops; use of trails for any purpose; recreational activities undertaken during an event, all travel either within or beyond the designated boundaries, including in the backcountry and on logging roads and trails; construction or maintenance of trails; hauling or transportation of tools or building materials, or other related activities or services, which are organized, provided, arranged, conducted, sponsored, promoted or authorized by or connected with the Releasees.

SAFETY

I have been advised to wear approved safety equipment while participating in Trail Building Activities, and to comply with all applicable municipal and provincial laws and regulations. I recognize that serious injury or death can result even when approved safety equipment is worn.

ASSUMPTION OF RISKS

I am aware that participation in Trail Building Activities involves many risks, dangers and hazards including, but not limited to: natural obstacles, trees, roots, tree stumps, logs, forest deadfall, cliffs, rocks, rock drops, loose gravel, holes and depressions on or beneath the trail or surface, streams and creeks; changing variable and difficult weather conditions; constructed features such as bridges, ramps, ladders, bumps, berms, jumps, and drops; travel on back-country roads; road-banks and cut-banks; hand or power tools; collisions with natural and constructed objects, other participants, vehicles, pedestrians, spectators and officials; encounters with domestic and wild animals, negligence of other persons; and NEGLIGENCE ON THE PART OF THE RELEASEES. I UNDERSTAND THAT NEGLIGENCE INCLUDES FAILURE OF THE RELEASEES TO TAKE REASONABLE STEPS TO SAFEGUARD OR PROTECT ME FROM THE RISKS, DANGERS AND HAZARDS OF TRAIL BUILDING ACTIVITIES.

I AM AWARE OF THE RISKS, DANGERS AND HAZARDS ASSOCIATED WITH TRAIL BUILDING ACTIVITIES AND I FREELY ACCEPT AND FULLY ASSUME ALL SUCH RISKS, DANGERS AND HAZARDS AND THE POSSIBILITY OF PERSONAL INJURY, DEATH, PROPERTY DAMAGE OR LOSS RESULTING THEREFROM.

MINOR PARTICIPANT

In consideration for allowing my minor child/ward to participate in Trail Building Activities, I hereby warrant and agree:

1. I am familiar with and accept, on behalf of myself and my minor child/ward that there is the risk of serious injury and death in participation in Trail Building Activities;
2. I have satisfied myself and believe that my minor child/ward is physically, emotionally and mentally able to participate in Trail Building Activities, and that his/her equipment, is mechanically fit for his/her use;