

The Whitefish Trail - 2015

Trail Construction Specifications & Scope of Services

Dollar Lake & Little Beaver Lake Areas

All trail construction slated for 2015 will occur in the Dollar Lake & Little Beaver Lake areas, on school trust lands managed by the Department of Natural Resources and Conservation (DNRC). The Whitefish Trail project has an easement with DNRC that authorizes construction of the trail system. Project Managers and Whitefish Trail Designers David Noftsinger and Greg Gunderson will coordinate all trail construction and related activities. Any work proposed to occur must be approved by Brian Manning - DNRC Stillwater Unit Manager.

Natural Surface Trail Construction Guidelines

The Whitefish Trail is primarily a natural-surface trail system, meaning there are no imported materials for the majority of the trail. The final trail tread will consist of compacted mineral soil. As a recreational trail, the trail must be aesthetically pleasing and have enjoyable “flow” as it travels through the forest. In addition, specific design features such as grade reversals and climbing turns will be frequently utilized throughout the trail system. It is highly recommended that all trail contractors purchase and read the book **Trail Solutions**, produced by IMBA (International Mountain Bicycling Association). This book is available on IMBA’s website at www.imba.com. All contractors must be familiar with terminology such as backslope, outslope, trail tread, grade reversal, climbing turn, switchback, running grade, fall line, and others.

All trail segments will be designed and pin-flagged by project managers David Noftsinger and Greg Gunderson. *All contractors must work closely with the project managers to achieve their specifications for trail construction.* The most important feature of natural-surface trails is controlling the flow of water. This is achieved through proper outslope and placement of drain dips (grade reversals) throughout the trail system. The contractor must demonstrate a clear understanding of surface hydrology and flow of water prior to beginning the project. The following criteria apply to all natural surface trail segments:

- **Trail Construction must follow pin flag line as placed in the field by Trail Designers.** Entire outer edge of trail will be pin-flagged every 4’-6’. *Do not reroute any portion of trail without consultation and approval by Trail Designers.*
- **Natural Surface Trails must be constructed 39” wide.** This is typical minimum track width for small mini-excavators and other trail-designed mechanized equipment. *All mechanized equipment used may not exceed the width of the trail.*
- **Backslopes blended with natural slope.** Backslopes must be cut at a stable angle, typically a minimum of 1:1 ratio, and blended with the natural slope. Top edge should be rounded.
- **Trail tread outsloped 3%-6%.** All trail segments must be properly outsloped 3%-6% to ensure drainage of surface water.

- **On flat ground and low-angle slopes, frequent and appropriately-placed drains must be constructed.** *Drains may be as close together as every 10' (feet) in some locations.* Trail Designers will work with contractor to identify proper locations. Drains must move water a minimum of 4' away from the trail tread.
- **Passing and/or Rest Areas at 1000' intervals.** Passing areas up to 48" (inches) in width will be constructed roughly every 1,000' (feet) along the trail. Passing areas must be built in locations designated by Trail Designers.
- **Insloped (banked) turns.** Banked turns will be constructed where appropriate, based on topography and trail flow. *Banked turns must accommodate a full 39" tread width for uphill traffic.* The toe of the banked turn should start on the outside edge of the 39" tread.
- **Waste material dispersed.** The DNRC has developed BMPs (Best Management Practices) that must be adhered to at all times during trail construction. They are:
 - a) All trails will be constructed to "IMBA" (International Mountain Bicycling Association) standards.
 - b) Backslopes (cutslopes) must be at a stable angle.
 - c) Wasted material must be spread to a depth not to exceed 1.5 inches.
 - d) Depositing waste material within a draw is prohibited. Additionally, wasted material should not be placed in a location that could facilitate erosion to a draw.
 - e) Bare soil must be seeded within 7 days to stabilize soils. Trail volunteers will do all grass seeding during the construction season.
 - f) Drainage must be maintained at all times on the trails.
 - g) Limit trail use during wet periods.
 - h) Motorized access for the purpose of constructing the trail, including the transport of equipment and supplies necessary to support the construction work, will be allowed only upon approval of the DNRC Unit Manager.
 - i) Similar motorized access for the purpose of maintaining and repairing the trail may, under extraordinary circumstances, be allowed upon approval of the DNRC Unit Manager.
- **Clip all protruding roots from trail tread and backslope.** All roots (regardless of size), must be cut or clipped within 1" of ground surface. *On gravel trails, roots must be clipped prior to placement of gravel.*

Additional Information

1. Contractor (not employees) must be available to walk the trail with Project Managers before, during, and after construction. This level of coordination is imperative for a successful finished product.
2. Bids must be for a cost per lineal foot of trail construction, including both machine work and hand work.
3. Contractor should assume there will be final touch-up work required before completion and final invoicing. All work will be clarified by Project Managers.
4. Some help may be anticipated with hand work by trail volunteers. Project Managers will schedule and oversee all volunteer activities.

5. All invoices must be submitted to Project Managers. Address for mailing invoices: Forestation, Inc., PO Box 1043, Whitefish, MT 59937: Email addresses for emailing invoices: greg@forestation.org
6. Additional excavator work may be requested by Project Managers. Please include a rate for additional excavator work (based on machine hour meter), as well as hourly rates for hand labor.
7. Trail work must be completed no later than September 30, 2015.