

## Continental Ranch Anchor Guidelines (CRAG)

These guidelines were prepared by the Continental Ranch Bolting Committee in order to achieve safe and responsible route setting, as well as to create a level of consistency for protection. It is important to follow these guidelines for obvious safety reasons, and to avoid retrobolting in the future. Failure to adhere to these guidelines can, and will, result in the route being altered, replaced, or removed. We apologize in advance for any hurt feelings, squashed egos, or overstating the obvious, but due to the remoteness of this ranch it is paramount that we create a safe climbing environment. Whether you are a beginner or veteran route setter we recommend visiting the following website on route setting:

[www.dtek.chalmers.se/Climbing/Hardware/howtobolt.html](http://www.dtek.chalmers.se/Climbing/Hardware/howtobolt.html)

### General

- Safe routes **MUST** be your main concern. Please install your route with forethought and care to cater to the inexperienced or careless climber, and to avoid unnecessary injuries.
- Toprope your desired route first to be sure it is worthwhile, or even justified. Also this is the correct way to determine bolt placements. Please be sure of your bolt placements **BEFORE** you place them.
- Wear a helmet! Loose rock can be dislodged by rope movements above (or below) you.
- Use static ropes for rap bolting.
- Any route line that can be **SAFELY** protected with natural protection must be left unbolted.
- Clean your route thoroughly of any loose rock or teetering blocks. Most walls are fairly clean, but be sure to assess any possible loose rock. This includes any “off-route” rocks that are near enough to be dislodged by errant climbing. When cleaning rock be sure no one is in the area below, and that your rope and gear is out of harms way.
- First time bolters should practice elsewhere first before placing bolts at this ranch. They should be closely supervised and instructed by an experienced route setter who can supply safe instruction. Beginners should not begin bolting their own lines until they are well schooled.
- Use only good quality hardware manufactured by reputable companies such as Metolius and Fixe. Homemade hardware will not be allowed.
- Do not crowd routes. There should be a minimum of 6' between route lines. The only exception to this is a variation to an existing route.
- No obscene or offensive route names.
- Once route is approved, installed, and opened, please inform committee of its name, rating, and first ascent so that it may be entered into the next guide.

### Bolts and Their Placements

- Use 1/2" X 3-3/4" or 4" Rawl 5 piece Expansion Bolts. Although 3/8" bolts are common in other sport areas, we prefer the larger size in this limestone. Please, no wedge bolts (studs with nuts).
- If you encounter placing a “spinner” bolt, please spend the time to remove it. At the very least remove the bolt itself. If necessary chop it with a cold chisel. Do not leave it behind with tape or any other marking.
- Do not place bolts or anchors on to detached blocks, or areas of rock that have cracks or seams. Unless they are of such a large size or shape to be **SURE** they will not move under great force. Check any such block with a crowbar.
- Check your chosen drill spot with your hammer. Make sure it is solid rock, and chip away the patina (the gray surface) to make the hanger sit correctly and flush. Use protective eyewear when hammering rock.
- When setting clip hangers, be sure to direct the line of stress straight down toward the gravity line. This is the line between the center of the bolt hole and the bottom point of the hanger opening.
- No Runouts! Bolts need to be placed at reasonable distances, but don't overbolt either.

- There **MUST NOT** be a potential for ground falls! Place your first clip points early and often.
- Guard against falls onto ledges.
- Guard against pulling slack at difficult clip stances.
- Be considerate of shorter climbers. We prefer clips that are at chest or head level. Don't force climbers to make a move, or pull slack that will place them in a bad fall.
- Bolt lines should finish at obvious cliff top. Do not place anchors part way up the wall. If you can't climb the top of the wall for the route you should consider leaving it for someone else. Or bolt entire line and leave it an open project, or red tag your first bolt if you want to reserve the first ascent.

### **Anchors**

- Create 2 bolt rap anchors using 3/8" Screw Link (tightened with a wrench) with either a 3 or 5 piece 3/8" chain (X2 for each side of anchor) mounted on a hanger. Do not use even number of chain links. Or, consider using Fixe ring anchors. Do not use webbing, single bolt anchor, or washers and chain directly on a bolt.
- Do not use Cold Shuts or Lap Links.
- When setting hangers for your anchor be sure to direct the line of stress toward the point where the two chains will meet. They should not point straight down as for a clip hanger.
- If placing hangers above a lip, or top ledge, be sure to determine where the chains will stress on the edge of the lip or ledge. The screw link should be above this point if possible to allow only the first couple of links of the chain to lay on this stress point. Be sure end link is free of this point. Do Not place entire anchor on top of a ledge, which would require pulling a rope over the edge.
- We will allow anchors that are a set of hangers alone without rap chains if there is a convenient and safe descent from top out, or if a rap anchor is within a safe distance nearby. Any such anchor must not place a climber in danger of falling while removing gear from hangers.
- Project anchors will be respected for a reasonable length of time. After 1 year project anchors will be determined as Open.

### **Traditional Routes**

- Any route line that can be **SAFELY** protected with natural protection must be left unbolted on the route itself. Please install a Rap anchor at the **TOP** of any such route. Please clean the route of potential rock fall and plant matter before attempting any on-site leads.