c. Bridge. Rope bridges are employed in mountainous terrain to bridge linear obstacles such as streams or rivers where the force of flowing water may be too great or temperatures are too cold to construct a wet crossing.

(1) Construction. The rope bridge is constructed using static ropes. The near anchor is attached to the side of the obstacle and extends from the near anchor to the far anchor. The near anchor is anchored with an anchor bolt on the far side of the obstacle, and is tied off at the near end with a transport tightening system. Rope bridge planning considerations follow:

- Does the installation allow for bypassing obstacles?
- (Traditionally) Can you secure the installation from construction through modification to disassembly?
- Is it in the most suitable location such as a bridge or the river? Is it easily secured?
- Does it have near and far side anchors?
- Does it have good holding and off-loading platforms?

(2) Equipment (1 Rope Bridge):
- One static rope per anchor
- One static locking carabiner
- Two steel clips
- Two 130-foot static ropes

(3) Construction Steps. The first Ranger swings the rope to the far side and ties a temporary anchor (Figure 9-4) between the anchor and chair level, with at least 8 to 10 turns. The BTC first a transport tightening system (Figure 9-20) to the near side anchor point. Then, the BTC first a suspended platform and incorporates a locking half hitch around the adjustable nut. Insert two steel carabiners into the nut so the nuts are adjustable and opposed. The rope is then routed around the near side anchor point at waist level and dropped into the steel carabiners:
  a. A three Rangerswing team swings forward from the platform. No more than three are used to tighten the rope. Using more can cause the tightening of the rope, bringing it near the anchor.
  b. Once the rope bridge is tight enough, the bridge team secures the transport tightening system (Figure 9-20) using two half hitch, without tying more than 4 inches of rope.

(c) Personnel crossing either the Commando Crawl (Figure 9-21), Rappel Seat (Figure 9-22), or Monkey Crawl (Figure 9-23) method.

**Figure 9-20. TRANSPORT-TIGHTENING SYSTEM**

*Figure 9-21. COMMANDO CRAWL METHOD*

*Figure 9-22. RAPPEL SEAT (TYROLEAN TRAVERSE) METHOD*

*Figure 9-23. MONKEY CRAWL METHOD*

d. Bridge Recovery. Once all except two troops have crossed the rope bridge, the bridge team commander (BTC) chooses either the wet or dry method to dismantle the rope bridge. If the BTC chooses the dry method, he should have emplaced his tightening system with the transport knot:

- The BTC backstays all of the slack coming out of the transport knot, ties a fixed loop, and places a carabiner into the fixed loop.

- The seat to last Ranger to cross should attach the carabiner to his rappel seat or harness, and then move across the bridge using the Tyrolean traverse method.

- The BTC removes all knots from the system; the far side remains anchored. The rope should now only pass around the near side anchor.

- A three Ranger pulling team, assembled on the far side, takes the end brought across by the next to last Ranger, pulls and holds the rope tight again.

- The BTC abseils himself on the rope bridge and moves across.

- The BTC descends the far side anchor, removes the knots, and pulls the rope across.

- If it is a wet crossing, any method can be used to anchor the tightening system.

- The BTC has removed all knots from the system.

- The BTC, now at the near side anchor, attaches to his rappel seat or harness. He then manages the rope as the slack is pulled to be far side.

- The BTC then moves across the obstacle while being belayed from the far side.

**Figure 9-4. TENSIONLESS NATURAL ANCHOR**

- Suspension Traverse. The suspension traverse is used to move personnel and equipment over rivers, streams, and chasms, or up or down a vertical obstacle. By combining the transport tightening system used during the rope bridge, use a frame used for vertical hauling (Figure 9-38), and belay techniques device, one can make a suspension traverse (Figure 9-26) and