

Troop 75 Use Form

Rappelling & Climbing Equipment

(PRICES MAY VARY DUE TO ANNUAL PRICE INCREASES & AVAILABLE DISCOUNTS)

Name _____ Parent Attending? _____

FEES:

Camp Site, Food & Fuel Fees:	\$20.00
Rope & Equipment Fee:	\$20.00
1st Time Participant Personal Equipment Fee (\$20.00- 1 time fee)	_____
3rd Time & Up Participant Optional Equipment Fees (see below)	_____
TOTAL	_____

BSA Rules require that all equipment must be provided by the Instructor, therefore personal equipment will be purchased, and marked, for the use of the Scout or Adult at all Troop events. This personal equipment will be handed out at each event, **MUST** be returned at the end of each event and will revert to the Troop after leaving the Troop. Scouts are permitted, however, to use, and keep, a personal harness but, per Troop Rules, **ONLY** after first using a Swiss seat for two (2) years. Scouts, age 16+, are eligible to be certified as BSA Junior Instructors and if so certified will be permitted to retain optional personal equipment they may wish to purchase.

Black Diamond Momentum AL Harness (\$50.00)	_____
Black Diamond Bod Harness (\$40.00)	_____
Black Diamind Half Dome Helmet (\$50.00)	_____
CMI Rescue 8 (\$42.00)	_____
Black Diamond Super "8" (\$15.00)	_____
Black Diamond ATC (\$19.00)	_____
Omega Pacific Jake Screw Gate Carabiner (\$16.00)	_____
Omega Pacific ISO Oval Carabiner (\$7.00)	_____
TOTAL	_____

.....
 The Troop will provide rappelling & climbing lines and all associated equipment, training, and supervision. **SCOUTS & ADULTS MUST BRING A GOOD QUALITY BICYCLE HELMET & PAIR OF WORK GLOVES THAT FIT!!!**

For the safety of all, **EVERYONE WHO ATTENDS A TROOP CLIMB/RAPPEL EVENT MUST WEAR & USE PERSONAL EQUIPMENT WHETHER YOU INTEND TO CLIMB OR RAPPEL OR NOT!** This personal equipment consists of webbing (20' for Scout & 30' for Dad) for a Swiss Seat; a Locking Carabiner and a Figure 8 which may be shared with a Buddy (particularly a father and son); and your own helmet & gloves.

HELMET USE ON THIS EVENT

(Over)

Climbing/Rappelling Participants will be required to wear a helmet **AT ALL TIMES** whether instructing, belaying, rappelling, climbing ... OR ... when watching, waiting to rappel or climb, or hiking to and from the rock face.

FOOD ON THIS EVENT

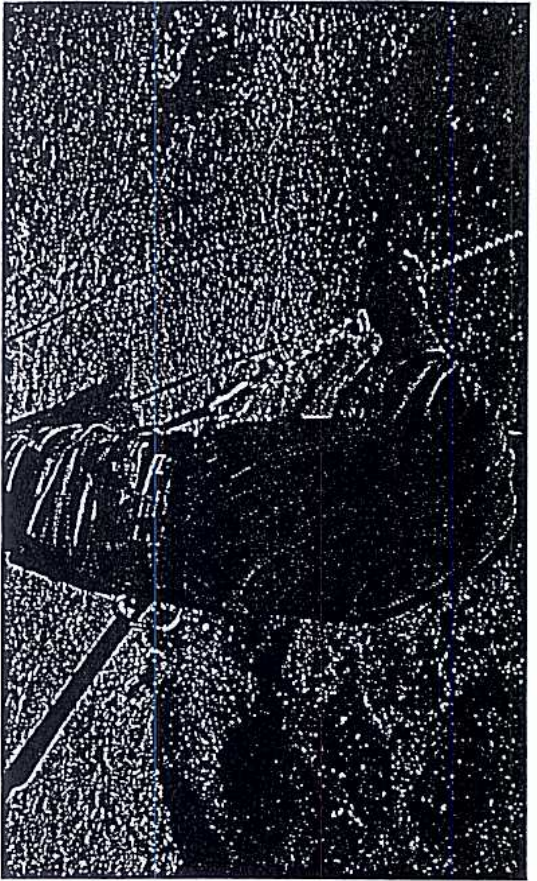
The Troop, through Patrol Cooks, will also provide breakfast (quickie) & dinner for Friday & Saturday. Patrols will receive budgeted food money (\$5.00 per Scout) from Mr. Barnard. Scouts and parents, however, will pack in their own water, lunch (x2), snacks, AND ANY NECESSARY CLEANING GEAR, out to the rock face and will also need pocket money for White Castle/McDonalds (x2) for trip to and from Camp. Scouts/Parents can pack bag lunches, but everyone is encouraged to split into small groups of 2~4 (2 works best for lunch) to coordinate lunch/snacks with a buddy to get the back packing culinary experience. Back packing food idea outlines are available, but please note they must be light & quick as we will be busy. PLEASE BRING A DAY PACK to carry essential gear to and from the Rock Face.

DEPARTURE & RETURN

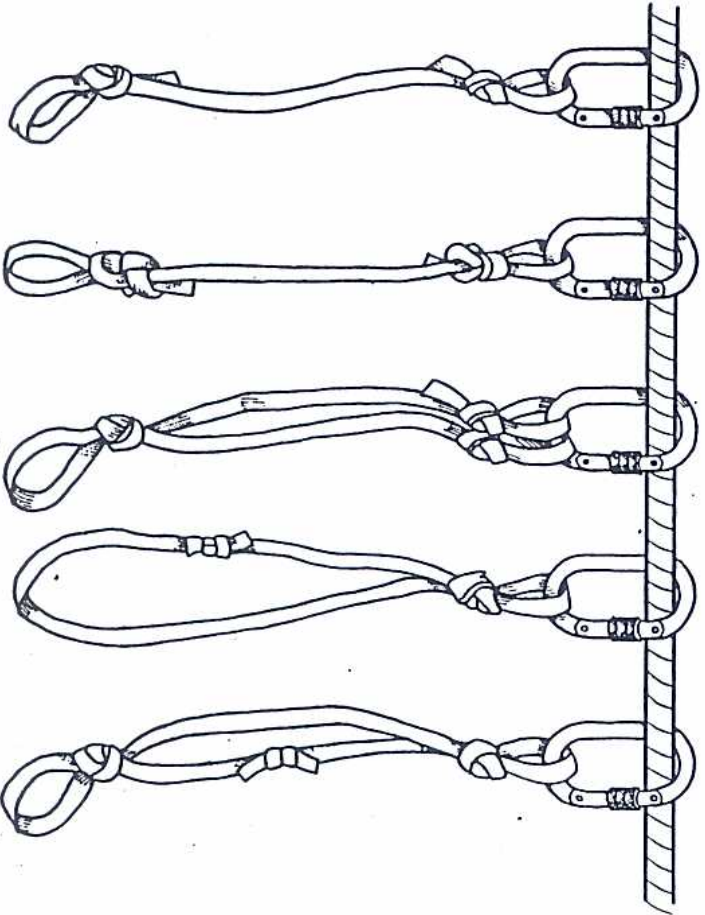
Hocking SP is near Lancaster and is approximately a 3 ½ - 4 hour drive. The route is I-271 to I-71 to I-270 to US33 to SR664 to SR374 to the "Youth Group Camp". Hocking Park Office is (740) 385-6841 and the Camp Office is (740) 385-6165. Because there is so much competition for Rock Face usage, we typically plan this event for a 3 day (NEOA) weekend so that we can be at the rock face Friday morning. We depart Thursday evening at 6:00PM and return approximately 1:00PM Sunday. Older Scouts working on Instructor certification may have the option of returning to the Rock Face Sunday AM, in which case they will return approximately 6:00PM.

REQUIRED SKILLS (Hand Outs & Training at upcoming meetings - see calendar) will be covered at the three (3) meetings leading up to the event. Scouts will be sent home with retired webbing & Handouts **AND MUST PRACTICE SWISS SEAT** at home, bring webbing to all meetings, and return webbing when departing for Event. The last meeting before the event will occur & earlier than usual meeting at the Barn where Scouts will practice rappelling off picnic tables (adults needed to help). Parents are asked to insure that Scouts practice the Swiss Seat & not do anything stupid with webbing at home.

1. Commands
2. Knots
 - Water Knot
 - Figure 8 & Figure 8 on a bite
 - Square Knot
 - Fisherman (called Grape Vine by Climbers)
 - Double Fisherman (called Double Grape Vine by Climbers)
 - Overhand Knot
3. Swiss Seat



Belayers use webbing to anchor themselves securely.



Carabiners are used to clip together ropes and loops of webbing.



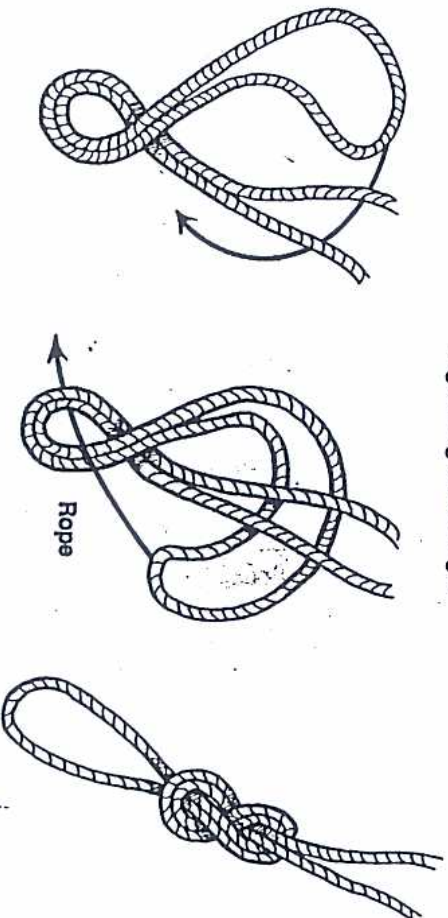
Knots

Rope is such an important part of climbing and rappelling that you shouldn't be surprised to discover that tying knots is a basic skill all climbers must learn. You might already know how to tie some climbers' knots.

Work on tying knots until you are able to tie them quickly and neatly. Practice before you go climbing. Continue practicing so that the knots become natural to your fingers and you can tie them almost without thinking. You should be able to tie all of the basic climbers' knots with your eyes closed, especially if you plan to go on to more advanced Class 5 climbing.

A good way to learn climbers' and other knots is to carry a two-foot piece of parachute cord in your pocket. When you have spare time—while waiting for a bus, for example—you can pull out the cord and run through your collection of knots.

Figure eight on a bight



Webbing

Figure Eight on a Bight

A *bight* is a bend in a rope. Forming a bight in a rope and then tying a figure-eight knot with it results in a loop that will not slip or come loose. Snap a carabiner into the loop, and the rope can be attached to the sling of an anchor or to a seat harness for climbing or rappelling! When this knot is tied in the end of a rope, use the remaining slack to back up the figure eight with an overhand knot or a grapevine knot. (To review the steps for tying an overhand knot, see your *Boy Scout Handbook*.)

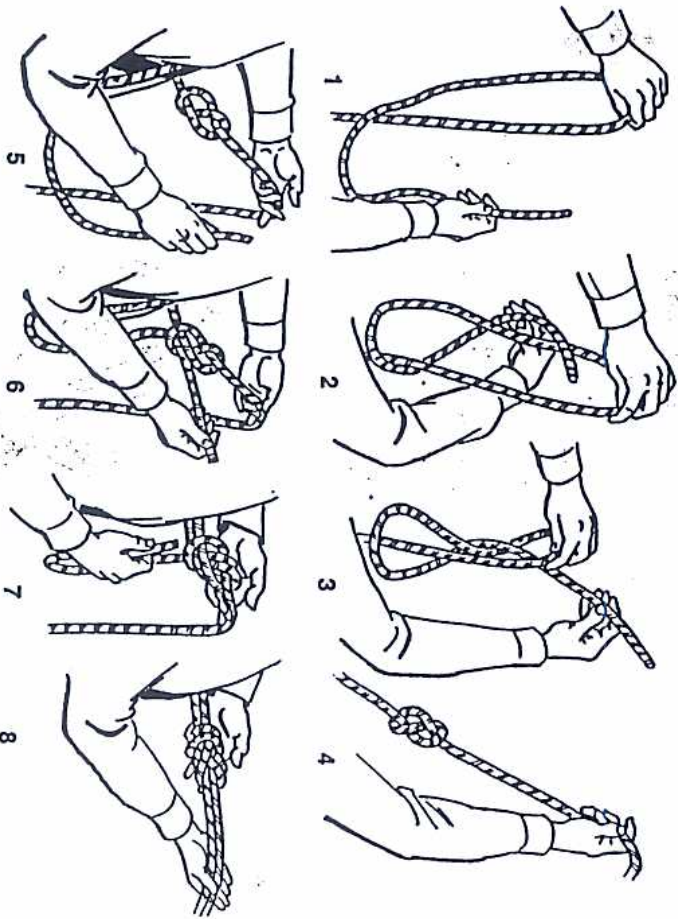
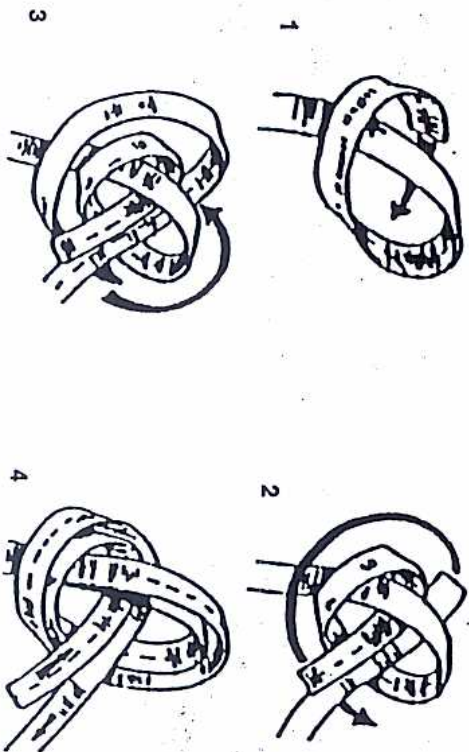


Figure eight follow-through

Figure Eight Follow-Through

This is the same knot as the figure eight on a bight, but with an important difference in the way it is made. The figure eight on a bight must be tied in a rope *before* it is attached to a carabiner. The figure eight follow-through can be tied *after* the end of the rope has been passed through a carabiner, anchor sling, or seat harness.

Begin by tying a simple figure-eight knot in a rope (steps 1-4 in the illustration). Run the end of the rope through the seat harness or device to which you wish to attach it (step 5). Then trace the end of the rope back through the figure-eight knot (the "follow through," steps 6-8). Use the remaining slack to back up the figure eight with an overhand knot or a grapevine knot.



Water knot in webbing

Water Knot

Use a water knot to tie together the ends of a piece of webbing to make a loop sling for use in anchors and some seat harnesses. The water knot will not slip once it has been tightened by weight; it can be very difficult to untie after being tightened.

The an overhand knot in one end of the webbing. With the other end of the webbing, trace the first end all the way back through the overhand knot. Straighten the knot so that the webbing surfaces lie flat against one another, then pull it as tight as possible.



Grapevine Knot

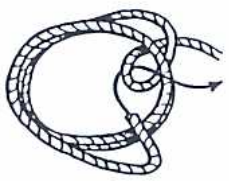
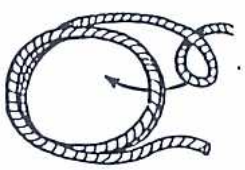
A grapevine knot (also known as the double fisherman's knot) is the most secure knot for tying the ends of two ropes together. Another common use for the grapevine knot in climbing is to secure the free end of a rope to the standing part after tying a figure-eight knot or a bowline on a coil. You actually tie only half of the grapevine knot when you use it as a safety or "stopper" knot. Such a backup knot gives extra security to the primary knot.

Bowline on a Coil

Rappelers use the bowline on a coil to tie a belay rope around their waists. Back up the knot with an overhand knot or a grapevine knot.



Grapevine knot (double fisherman's knot)



Bowline on a coil

Secured

Seat Slings and Harnesses

A harness or seat sling gives climbers, rappellers, and belayers a way to attach themselves safely and reliably to ropes and belay anchors. While a single rope or a sling of webbing around the waist might ride up around the chest and constrict breathing, the leg loops of seat harnesses prevent that from happening. In a fall, the leg loops and waist belt of a climbing harness will distribute a person's weight in several directions, which can be more comfortable and safer than if the person had a safety rope tied directly around the waist.



A climbing harness has leg loops and a waist strap.



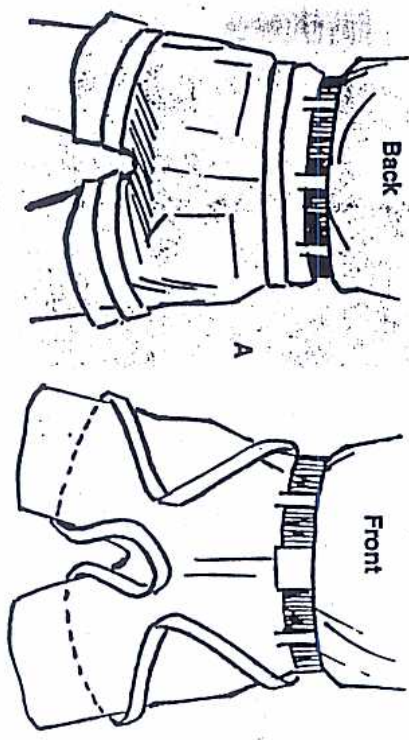
To secure the waist strap of a climbing harness, feed the end of the strap back through the buckle and pull it tight.



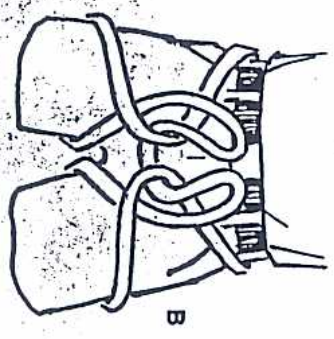


Climbing Harness

Commercially made harnesses usually require only that you slip your legs through leg loops and then secure the waist strap with a buckle. The end of the strap must then be fed back through the buckle and pulled tight. The leg loops of some harnesses can be adjusted; you should be able to slip two fingers between the loop and your thigh. If the harnesses available to you are not adjustable, you'll need to find one that fits your body comfortably.



Diaper sling



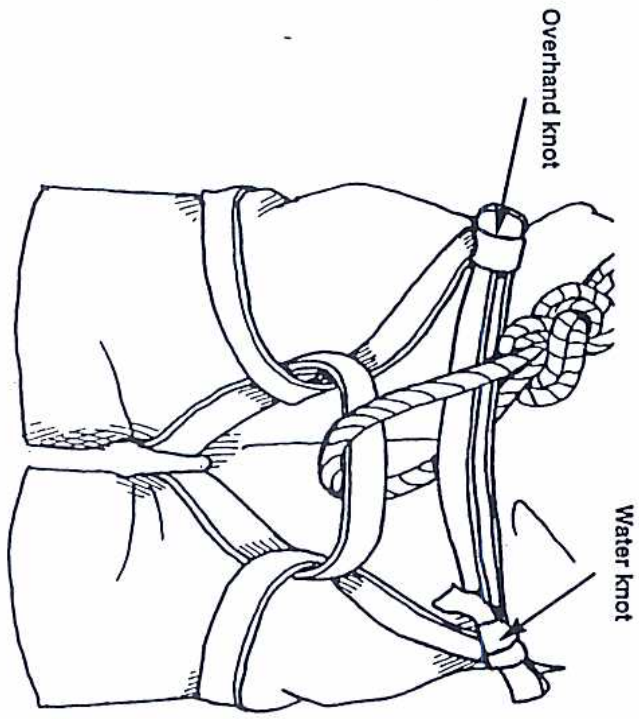
Diaper Sling

A diaper sling is made with a piece of webbing about three times as long as your hip measurement. Form a loop by tying the ends of the webbing with a water knot. Next, wrap the sling around yourself, centering the loop behind your back at waist height. Pull a bend of



webbing forward between your legs. (See Illustration A.) Secure that bend with the others in front of your body with a locking carabiner.

Form an oversized diaper sling with a larger loop of webbing. After pulling the bend forward between your legs, divide it in half, and tuck each of those bends through one side of the webbing. (See illustration B.) Clip the carabiner through the resulting bends.



Swiss seat for climbing

Swiss Seat and Knotted Leg-Loop Seat

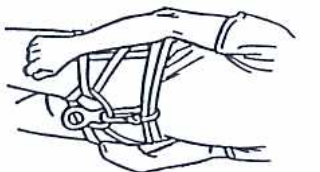
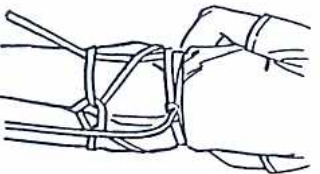
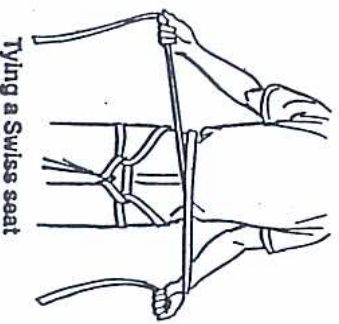
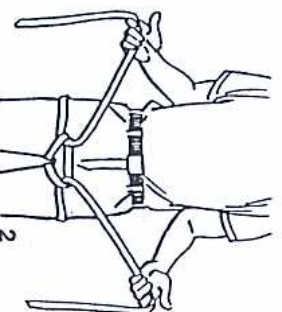
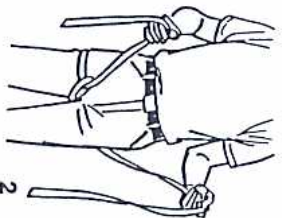
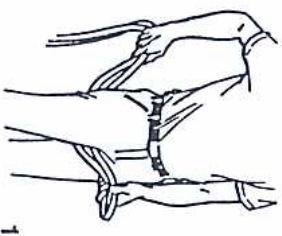
A 30-foot length of nylon webbing can be wrapped around your body and tied in special ways to form reliable, comfortable seats for climbing, rappelling, and belaying. Each of these seats must be tied exactly right every time to ensure your safety. Therefore, you must learn how to tie them from a qualified instructor. Once you have mastered tying the Swiss seat or knotted leg-loop seat, you can use the following descriptions as reminders of the correct methods.





Tying a Swiss Seat

1. Fold a 30-foot length of webbing in half and, holding the bend, step over it so that the sling is between your legs. Be sure the sling is not twisted.
2. Bring the right end of the sling around the outside of your right leg and run the end through the bend from below. Wrap the left end of the sling around your left leg and tuck it through the bend from below. Pull all the slack through the bend.
3. Wrap the ends of the sling behind your back in opposite directions and around your upper hips until most of the slack is gone. Keep the webbing flat and snug.
4. Secure the sling with an overhand knot on one side of your body. Then use a water knot to secure the ends of the sling on the other side.
5. Clip a carabiner into the webbing coiled around your waist and the original bend in the sling.



Tying a Swiss seat



Tying a Knotted Leg-Loop Seat

1. Holding one end of the webbing, measure off a length of webbing that stretches from your nose to your outstretched hand.
2. Keeping that length marked with one hand, wrap the webbing beyond the measured piece around your thigh to size it to your leg. Add 4 to 6 inches to that measurement to allow for a knot.
3. Maintain the leg-loop measurement as you remove the webbing from your leg, then tie the leg loop with an overhand-on-a-bight knot.
4. About three inches down from the first leg loop, on the remaining portion of webbing, repeat steps 2 and 3 to form the second leg loop. Each loop should be snug, but not tight enough to restrict circulation. You should be able to slip two fingers between the leg loop and your leg.
5. With the short, measured piece of webbing on your left side, put on the leg loops as you would a pair of pants. Pull the loops all the way to your crotch and adjust the knots toward the front. For the sake of comfort, be sure there are no twists in the webbing.
6. Let the short, measured piece of webbing hang. Wrap the remaining length of webbing around your waist, going first behind your back.
7. Unwind one or two complete wraps and tie an overhand knot around all the coils on your right side.
8. Take what remains of that portion of webbing, pass it behind your back, and tuck it into the coil on your right side. You'll use it later to tie the final water knot.
9. Lift the short, measured piece of webbing up to your waist on your left side and over the coil. Use the webbing to tie a loose overhand knot around the coil.
10. With the end of webbing that you tucked in during step 8, complete the water knot by running the webbing end through the overhand knot formed during step 9.
11. Back up the water knot by using what remains of the webbing ends to tie grapevine knots.



Belaying a Climber

Exchange verbal signals (see the chart below) with a climber. As the climber ascends, use your guide hand to pull toward your body any slack that forms in the rope. Work the slack on around your body with your braking hand, and let the loose rope pile up next to your feet. While holding the rope firmly with your braking hand, slide your guide hand out along the rope. Then clasp both sections of the rope in your guide hand so that you can slide your braking hand back along the rope toward your body. (Your braking hand must never leave the rope.) Repeat the process. Keep slack in the rope to a minimum to keep the length of any fall to a minimum if the climber slips.

Verbal Signals for Climbers and Belayers

Verbal signals allow a climber and a belayer to communicate and work together as a team even if they cannot see one another. Get in the habit of using verbal signals every time you are climbing or belaying. If the day is too windy or the area too noisy for climbers and belayers to hear one another clearly, you should postpone your climbs or move to another area.

Climber	Belayer	Meaning
"On belay?"	"Is the belay ready?"	
"Climbing."	"Belay on."	"All set. Your belay is ready."
"Slack."	"Climb on."	"Here I come."
"Up rope."		"Come ahead."
"Tension."		"I need some slack in the rope."
"Falling!"		"Take up the loose (slack) rope."
"Rock!"		"Hold the rope tightly and brace yourself in case I fall."
"Rope!"		"I'm falling! Get ready to brake."
"Off belay."		"Look out for falling rocks."
		"Rope being thrown down."
		"I'm in a safe place and no longer need a belay."
		"I'm no longer belaying you."



Verbal Signals for Rappellers and Belayers

The verbal signals rappellers use are a little different from those used by climbers, but the basic information shared with belayers is the same.

Rappeller	Belayer	Meaning
"On belay?"	"Is the belay ready?"	
"Rappelling."	"Belay on."	"I'm ready to belay."
"Tension."	"Rappel on."	"I'm ready to start down."
"Falling!"		"Go ahead."
"Off belay."		"Hold the belay rope tightly. Brace yourself in case I fall."
"Off rappel" or "Off rope."		"I'm falling! Brake the rope!"
		"I am done rappelling and am in a safe place."
		"I'm no longer belaying you."
		"The rope is free of equipment and is ready for the next rappeller."

Belaying a Rappeller

To belay a rappeller, begin with the bulk of the belay rope coiled beside you on your braking-hand side. Exchange verbal signals with the rappeller. As the rappeller descends, work the rope around your waist from your braking hand to your guide hand, and gradually release it to the rappeller.

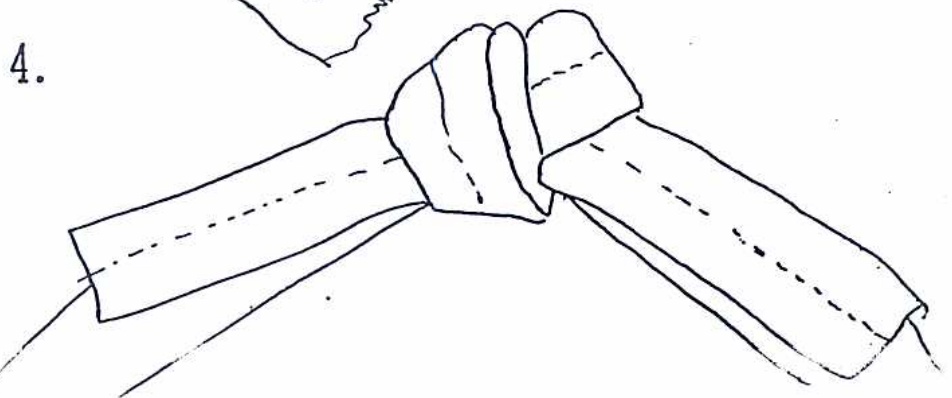
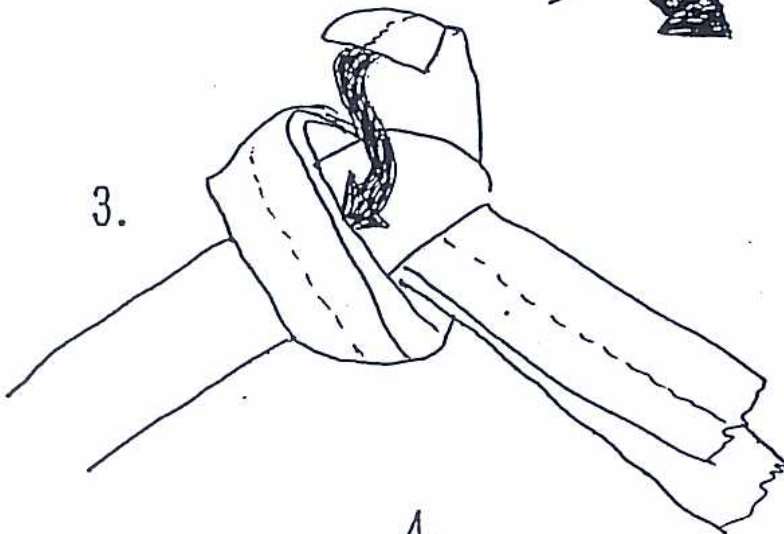
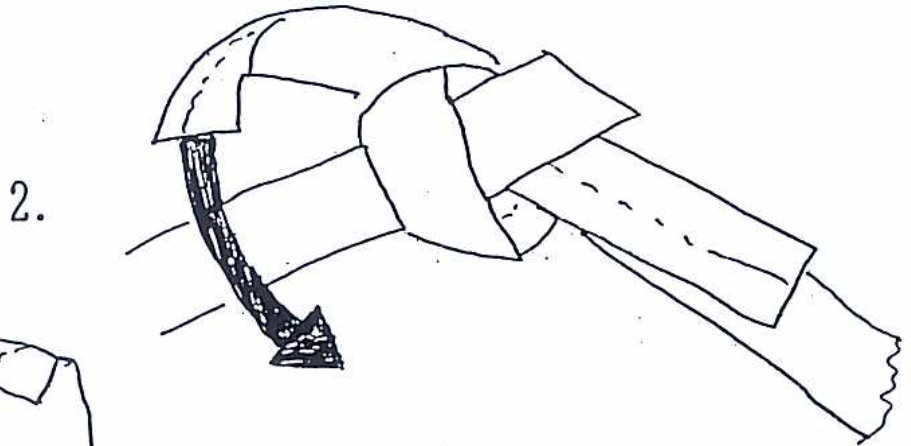
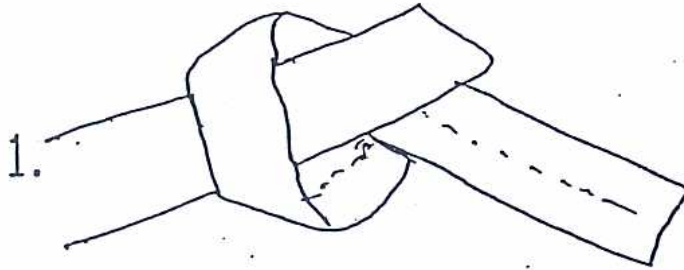
Checking a Fall

Your braking hand must never leave the rope while a climber or rappeller is on belay. The fingers of the braking hand are always curled around the rope, ready to clamp down if necessary. If a climber or rappeller falls, clench hard and quickly move your braking hand across your waist to the opposite hip, bringing the rope across your midsection so that the rope makes a loop around your hips. Hold the rope tight. Added to the grip of your hands, the friction of the rope against your body should be enough to stop the fall and hold the climber or rappeller in place. This is called a *body belay*.

WATER KNOT

IN WEBBING, USED FOR TYING WEBBING TOGETHER:

1. For joining two different pieces of webbing to form a longer piece.
2. For tying the two ends of one piece of webbing together to form a loop.



SIMPLE FIGURE 8

IN ROPE OR ACCESSORY CORD, USED AS:

1. A Stopper for security-

- A. Tied in the bottom end of a rope to prevent a person from rappeling off the end.
- B. Tied in the top end of a rope to prevent it from accidentally slipping through equipment.

2. A Foundation Knot for beginning-

- A. The Figure 8 Follow Through.
- B. The Figure 8 Bend.

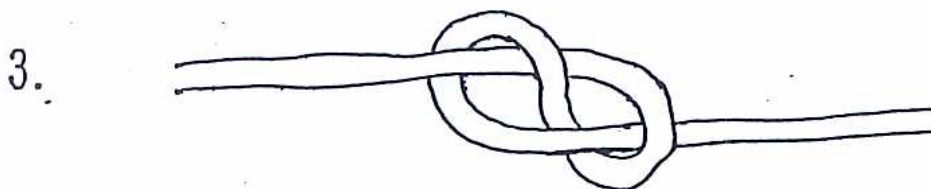
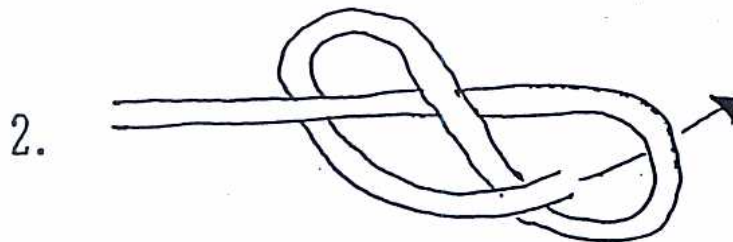
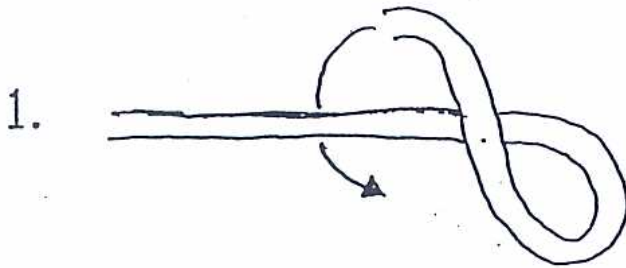
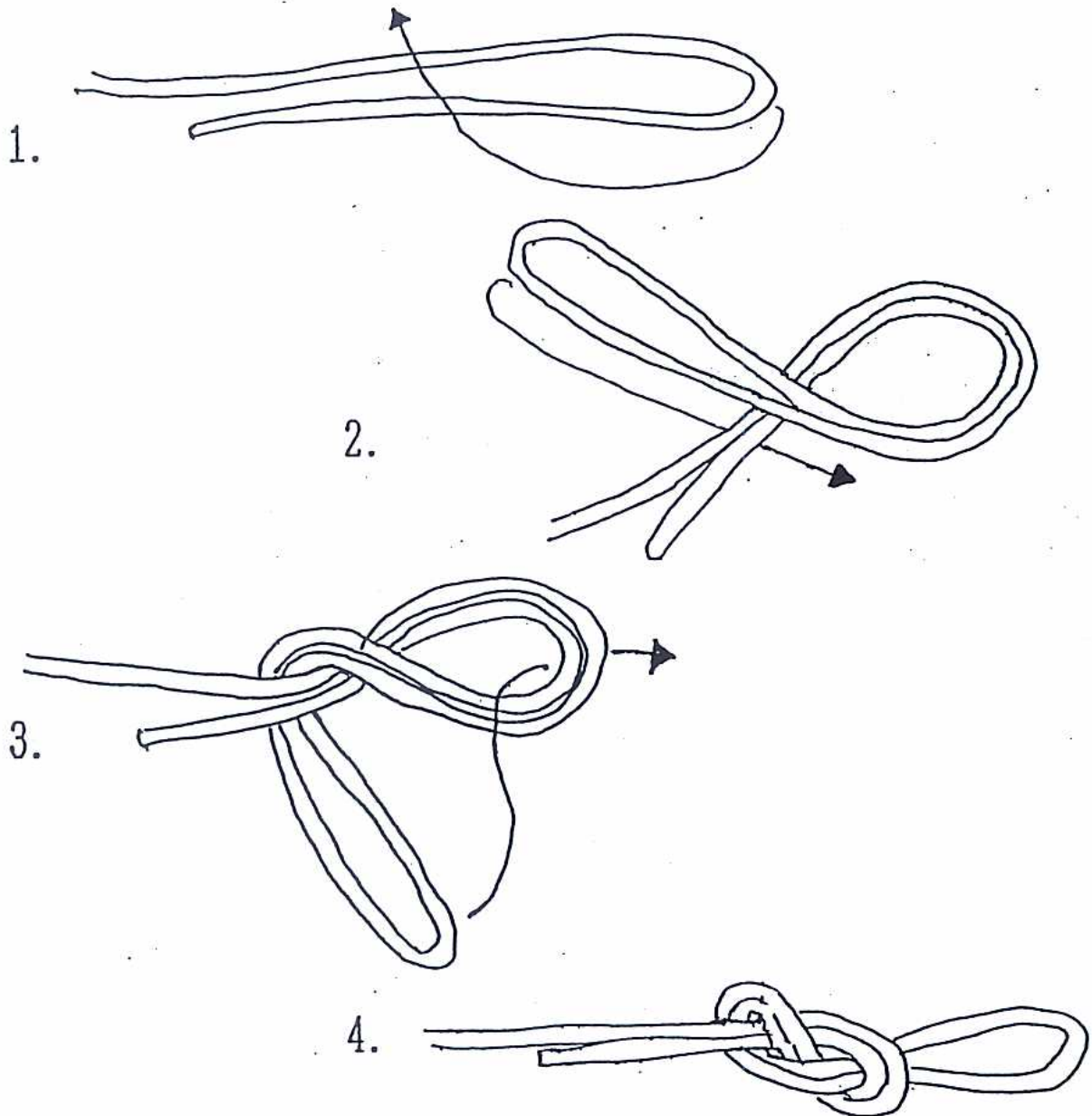


FIGURE 8 ON A BIGHT

IN ROPE. USED TO SECURE A LOOP FOR CLIPPING INTO FOR SUCH THINGS AS:

1. Safety lines
2. Persons being lowered
3. Litter and other rescue equipment
4. Anchor lines



MAKING A LOOP

DOUBLE FIGURE 8 LOOP: The Double Figure 8 Loop is a strong knot and the double loop reduces the wear and strength loss from the rope bending around the carabiner by splitting the load between the two loops.

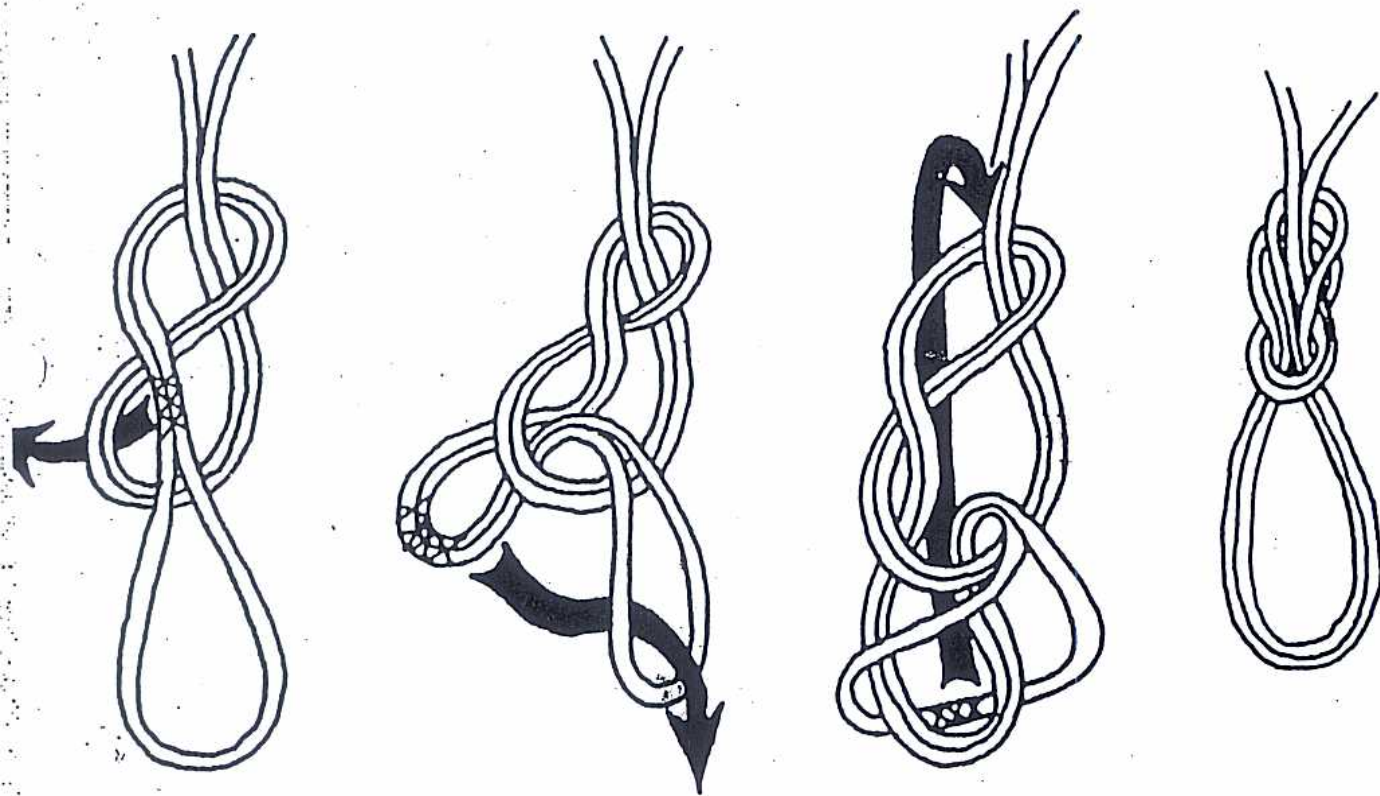


Figure 6-5 Double Figure 8 Loop Steps

Rockclimbing & Rappelling

Area

The Hocking State Forest Rockclimbing and Rappelling Area, located off Big Pine Road in Spring Hollow, is the only facility on state land in the county that permits rockclimbing and rappelling. Nearly a mile of cliff, ranging up to 100 feet, along with numerous slump blocks, cracks, chimneys and overhangs provides a variety of challenges to the rockclimber and rappeller.

Your safety is our main concern. Novices are encouraged to work with an experienced climber or rappeller who "knows the ropes". Because the area is comprised of soft sandstone, use of climbing aids such as pitons and chocks is strongly discouraged. It is much safer to top-rope.

The area closes at dark, campfires are prohibited, and please dispose of your litter properly.

INFORMATION & ASSISTANCE

Hocking State Forest
19275 State Route 374
Rockbridge, Ohio 43145
(614) 385-4402

OR

Division of Forestry, District Office
360 East State Street
Athens, Ohio 45701
(614) 593-3341

HOCKING STATE FOREST HISTORY

A visit to the Hocking State Forest can take you back to the past and provide a glimpse of the future. The sandstone cliffs reveal a time 300 million years ago when rivers to the east flowed into a shallow sea covering what is now called Ohio. Over geologic time, the land rose and small streams cut through the rock leaving the spectacular cliffs and waterfalls present today.

Remnant communities of birch and hemlock tell of times when the climate was much colder and glaciers threatened (but were stopped by hills just to the north). Large diameter 400 to 500 year old trees tell of simpler times and primitive technology. Most recent changes are exhibited by old road beds, abandoned homesites, and stands of pine trees now growing in what were 19th century corn, wheat and hay fields.

The Ohio Agricultural Experiment Station, predecessor to the ODNR Division of Forestry, started buying Hocking County land in 1924. Timber harvests were regulated, parks were developed, erosion was controlled, abandoned fields were planted to trees, species like beaver and turkey were reintroduced and Depression era people were given work. In 1949, the Ohio Department of Natural Resources was formed and the Hocking Hills State Park was separated from the Hocking State Forest. In 1976, three State Nature Preserves were also designated on the state forest.

Today, Hocking State Forest is managed for a variety of objectives including examples or demonstration areas of sound scientific sustained multiple-use management. Timber harvesting is closely monitored so it does not exceed the rate of growth. Erosion is actively controlled. Outdoor recreation is developed and encouraged. Habitat is provided and managed for game and non-game species. The ODNR Division of Forestry, state forest system is dedicated to providing an example of sound multiple-use land stewardship.

HOCKING

STATE FOREST



Ohio
Division of Forestry

*More Trees,
Healing Forests*

Rockclimbing & Rappelling

Area

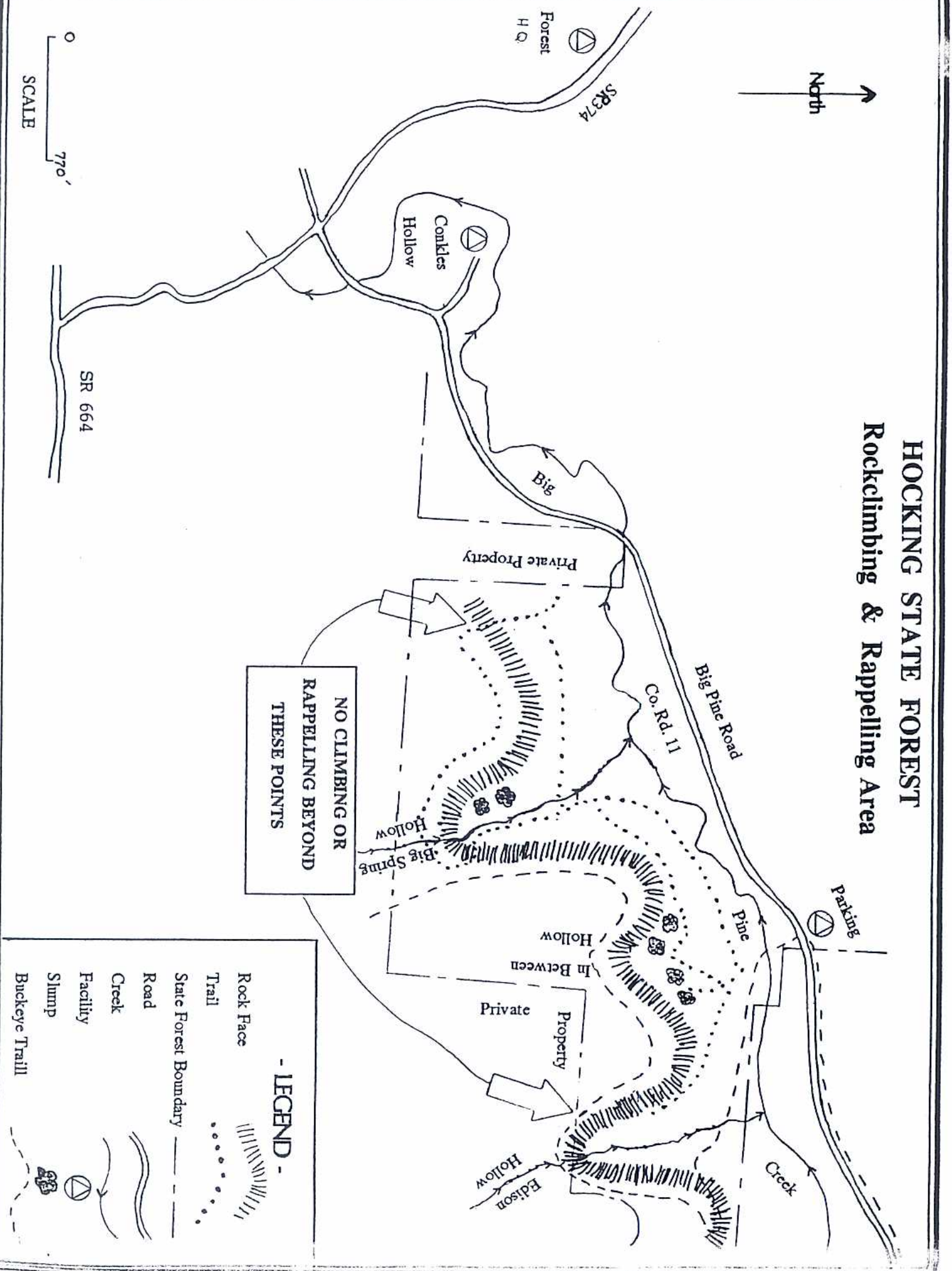
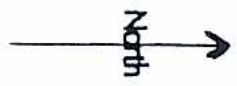
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Ohio Department of Natural Resources

George V. Voinovich, Governor
Donald C. Anderson, Director

Soil - Water - Wildlife - Recreation - Timber

HOCKING STATE FOREST Rockclimbing & Rappelling Area



- LEGEND -

- Rock Face
- Trail
- State Forest Boundary
- Road
- Creek
- Facility
- Slump
- Buckeye Trail