

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

**BARBED WIRE FENCE (BWF)
(Feet)**

CODE 382

I. MATERIALS

A. Wire

Use only new wire of two, twisted strands that are either, class 3 galvanized, 12.5 gauge (minimum) standard steel, or class 3 galvanized, 15.5 gauge (minimum) high-tensile steel. If wire only has 2-point barbs, then barbs should be no farther than 4" apart, and if wire has 4-point barbs, then barbs should be no farther than 5" apart. For sheep and goats use at least five strands of barbed wire for boundary fence.

B. Line Posts

1. Steel

- Only new "T" or "U" posts, constructed of high carbon steel, weighing a minimum of 1.25 lb/ft exclusive of anchor plate.
- Minimum 6' 6" long, studded, notched, or punched for wire attachment.

2. Wood

- Wood posts must be treated with a minimum of 0.4 lbs/ft³ of chromate copper arsenate (CCA-Type A, B or C), or equivalent.
- Minimum 6' 6" long, and 3-inch diameter.

C. Corner, Brace, and Gate Posts

1. Steel

- Minimum 4" diameter high-carbon steel pipe weighing at least 7 lb/foot and is class 3 galvanized or coated with a rust-resistant metal paint. Pipe ends must have a water-tight cap.
- Horizontal brace pipe needs to be 2" diameter (minimum), high carbon steel that weighs at least 3.6 lb/foot

and is class 3 galvanized or coated with a rust-resistant metal paint.

2. Wood

- Wood posts must be treated with a minimum of 0.4 lb/ft³ of chromate copper arsenate (CCA-Type A, B or C), or equivalent.
- Corner, brace, and gate posts must be at least 8' X 5^{1/2}".
- Horizontal brace members must be at least 6' 6" X 3".
- Landscape timbers cannot be used for posts or brace members.

D. Fasteners

1. For wood posts, use staples that are at least 9 gauge, class 3 galvanized. Minimum length for softwoods is 1½", and for hardwoods is 1".
2. Use manufactured clips or minimum 14-gauge wire for steel line posts.

II. CONSTRUCTION

A. Corners, Braces, Ends, and Gates

1. Posts (See Specification Table 3)

- Set posts for all fence assemblies a minimum of 42" deep, in holes with a diameter at least 2.5X the post diameter. The top of posts should be at least 2" above the top wire.
- Backfill wooden posts by thoroughly tamping soil around the post after every 4" of depth.
- Set steel pipe in concrete that extends 1" below the bottom of the pipe, and slightly above the soil surface.

2. Braces (See Specification Table 6 or FL Fence Drawing or Photos)

- H-braces are required for all corner, pull, end, and gate assemblies.
- Notch brace posts ½ to 1½” deep to provide a flat surface for placement of the center line of all horizontal brace members in the upper 1/3 of the post height.
- Anchor horizontal brace members to brace posts with a minimum 3/8” galvanized pin or spike driven through the post that penetrates the horizontal member at least 4”.
- H-braces must have a tension member consisting of two complete loops of 9-gauge smooth single strand, 12-gauge double strand, or 12.5-gauge high-tensile wire. One end of the loop is attached to the anchor (corner, end, or gate) post 4” above the soil surface, and the other end is attached to the brace post at the same height as the top of the horizontal brace member. Twist the loops to provide rigidity to the brace assembly.
- Tighten tension member with a tensioner made of permanent material such as rebar, pipe or pressure treated wood.

3. Corner and in-line pull assemblies (See Specification table 6)

- A single inline brace assembly is required for any horizontal angle or terrain changes ($> 15^{\circ}$)
- A single inline brace assembly is required when the distance from end post to end post exceeds 660’.
- Use an H-brace assembly with two crossed tension members on fences not exceeding 660, and double H-brace corner assembly $>660'$.

B. Line Posts

1. Steel

- The maximum distance between steel line posts is 16’ without the use of stays or 30’ with a minimum of 2 stays between the posts.

- Drive posts at least 24” into the ground. The top of the post must be at least 1” above the top wire.

2. Wood

- The maximum distance between wood line posts is 16’ without the use of stays, or 30’ with a minimum of 2 stays between the posts.
- Drive or bury wood posts at least 24” into the ground. The top of the post must be at least 2” above the top wire. If post holes are dug, backfill by tamping the soil around the post at every 4” depth.

C. Wire for Cattle (see Specification Tables for more information for cattle and for other classes of livestock)

1. Wire Spacing

- For cattle, use a minimum of three strands with the top wire at least 38” above the soil surface.
- Equally space the wires with the bottom 16” above the soil surface and the top wire at least 2” below the top of wooden posts or at least 1” below the top of steel posts. When more than four wires are used, it is not necessary to maintain equal spacing as long as top and bottom wire positions are as above and no spacing is $> 12''$.

2. Fastening

- On boundary fence, attach wires to the side of the post closest receiving the most livestock pressure.
- Avoid driving staples in-line with the wood grain. Place the staple parallel to the grain then rotate in the direction away from the cut face.
- Pull tension on wire per manufacturer’s specification and firmly attach to corner, end, gate, or pull posts.
- Wires may be attached to steel posts by use of manufacturer's clips or by two turns of 14 gauge galvanized smooth wire.

- Wire should be able to move freely between the fastener and the line posts.