



Practice Specification  
NY-382A Fence  
Barbed, Woven, or Wooden

## 1. Scope

The work consists of furnishing and installing permanent non-electrified fences and related essential components.

A complete barbed, woven, or wooden fence system may be installed in strict accordance to a single manufacturer's recommendations, subject to review and acceptance by the approving official.

## 2. Material

**All materials** — Use the type, size and quality listed below unless otherwise shown in the drawings, or specified in the Implementation Requirements (IR) or the Specific Site Requirements section. All materials are subject to acceptance by the approving official.

**Wire** — Use galvanized barbed wire or woven wire. Where high-tensile metal is used provide wire with Class III galvanization. The minimum gauge required is listed in Table 1.

**Table 1 – Minimum Gauge Required for Conventional and High Tensile Wire**

Material	Conventional	High-Tensile
Barbed Wire	12-1/2 g.	15-1/2 g.
Barbs	4 pt – 14 g.	16-1/2
Top & Bottom Woven	10-1/2g.	10-1/2
Remaining Woven	11 g.	12-1/2g.
Stay Wires	11 g.	12-1/2 g.

Do not intentionally electrify barbed or woven wire under any circumstances. Take all reasonable measures to ensure such wires will not be accidentally electrified.

Where electrified wire is specified, such as for an inside offset or above woven wire, follow NY Practice Specification 382B Fence – High Tensile Smooth and Coated Wire and Braided Electrified Rope.

**Fasteners** — Use Class III galvanized, slash cut point, minimum 9 gauge wire staples.

For fastening to hardwood posts, use staples with a minimum length of 1 inch. For fastening to softwood posts, use barbed staples with a minimum length of 1-1/2 inches.

For fastening to preservative pressure treated wood posts, use either hot-dipped galvanized, stainless steel, or other material recommended by the hardware manufacturer.

For fastening to steel, fiberglass and composite posts, use a minimum of 16 gauge galvanized wire or manufacturer's clips.

**Brace, corner, and gate posts** — Use black locust, red or white cedar, or preservative pressure treated softwood treated in accordance with American Wood Protection Association (AWPA) Standard U1 to the requirements of Use Category 4A (UC4A).

Fiberglass, composite, or other types of posts will not be accepted.

Use round posts with a minimum diameter of 5 inches, square posts with a minimum dimension of 5-1/2 inches in both directions. Use posts with a minimum length of 7-1/2 feet. Use posts that are structurally sound, predominantly straight throughout their length, and with all limbs trimmed flush with the body of the post.

**Line posts** — Use posts with a minimum length of 7 feet unless otherwise specified.

**Wood** – Use black locust, red or white cedar, or preservative pressure treated softwood treated in accordance with American Wood Protection Association (AWPA) Standard U1 to the requirements of Use Category 4A (UC4A). Use round posts with a minimum diameter of 4 inches. Use square posts with a minimum dimension of 3-1/2 inches in both directions.

Landscaping lumber is not acceptable.

**Steel** – Use galvanized “T” or “U” posts with a minimum weight of 1.25 pounds per foot of length.

**Fiberglass or composite** – Use “T” posts with a minimum width of 1.2 inches. Use round posts with a minimum diameter of 3/4 inches. Use composite posts with UV treatment certified to last 20 years.

Live trees may be used as shown on the plan map and as flagged in the field. The quality, location and extent of use of live trees will be subject to acceptance by the approving official. Do not fasten wire or insulators directly to live trees – use a spacer or offset acceptable to the approving official. Do not use live trees for corner or end posts.

**Brace rails** — Use round wood with a minimum diameter of 4 inches and a minimum of 8 feet long where horizontal and a minimum of 10 feet long where diagonal.

Landscaping lumber and square rails are not acceptable.

**Wooden planks** — Use well-seasoned or kiln-dried wooden planking treated in accordance with AWPA Standard U1 to the requirements of Use Category 3B (UC3B). All planks shall be a minimum of 1 inch by 6 inches nominal.

**Gates** — Provide and install gates of the types, sizes, and quality shown in the drawings or specified in the IR or the Specific Site Requirements section. Provide and install all hardware necessary for the proper functioning of the gate. Install gates and associated hardware according to the manufacturer's recommendations.

### **3. Setting posts**

Unless otherwise shown on the drawings or specified in the IR, install line posts for barbed wire and woven wire a maximum of 16 feet apart. Install line posts for board fencing a maximum of 8 feet apart.

Unless otherwise shown on the drawings or specified in the IR or the Specific Site Requirements section, install corner, gate, and end assembly posts to a minimum depth of 3-1/2 feet. Install line posts 3 feet deep. In locations where an electrified inside offset wire is specified, install line posts 2 feet deep.

When posts are driven, protect the top of the post from splitting by applying driving pressure uniformly over the entire post end area. Remove and replace posts that are damaged during driving.

When posts are set in hand-dug or augured holes:

- Make hand-dug postholes at least 6 inches larger than the diameter or side dimensions of the posts. Make augured postholes at least the same size as or slightly smaller than the diameter or side dimensions of the posts, then pound the post in.
- Hand compact earth backfill around the posts in 4 inch layers to the ground surface. When concrete is used, rod concrete backfill around the posts in maximum 12 inch layers, completely filling the posthole to the ground surface. Crown all backfill up around the posts to 2 inches above the ground surface.
- Allow concrete backfill around line posts to set at least 24 hours before stress is applied. Allow concrete backfill around corner, gate, and brace posts to set at least 48 hours before stress is applied.

#### **4. Brace assemblies**

Construct a single span brace assembly - 'H' brace or diagonal floating brace - with 6 or fewer strands of wire or rope on corners, gates, ends, and changes in topography, unless otherwise shown on the drawings or specified in the IR or the Specific Site Requirements section.

Place diagonal floating braces at  $\frac{2}{3}$  the height of the fence, measured from the ground up.

Use a double span brace assembly in similar conditions with fences where more than 6 strands of wire are used.

Single corner posts may be used for 2 or less strands of wire provided posts are set by power post driver and installed with a 3 to 4 inch lean away from the resultant pull of wires.

Use single or double span line brace assemblies with barbed and woven wire, installed at intervals of every 4000 feet or less on continuous straight reaches.

Install brace assemblies where the fence line changes horizontal direction greater than 20 degrees, vertically greater than 30 degrees, and on both sides of a watercourse crossing.

Where there are 2 or less strands of barbed wire and the fence line changes horizontal direction greater than 20 degrees, but less than 45 degrees, a single corner post may be installed. Install brace assemblies when the directional change is greater than 45 degrees, vertically greater than 30 degrees, and on both sides of a watercourse crossing when there are 2 or fewer strands of barbed wire.

Additional locations needing brace assemblies are specified in the IR.

## **5. Attaching fencing to posts**

Attach wire to posts as follows:

- a. Place the wire on the side of the post where the livestock are contained, and opposite the resources being protected, except on curves and corners where the wire must be placed on the outside away from the livestock.
- b. Fasten barbed wire and woven wire to each brace at ends and gate openings by wrapping each horizontal strand around the post and tying it back on itself with no less than 3 tightly wound wraps. If manufactured fasteners are used, they must be labeled for such application and installed according to manufacturer's recommendations.
- c. Where sections or lengths of woven or barbed wire need to be joined in a length of fence, wires will be spliced using a splicing sleeve and crimped with a crimping tool. Alternatively for woven wire, vertical stays can be placed over each other and the loose ends can be wrapped around the corresponding horizontal wire 6 times.
- d. Fasten barbed wire and woven wire to each line post. Use staples for wooden posts and use wire for steel posts. Follow manufacturer's recommendations for composite posts. Attach woven wire fencing at alternate horizontal strands to each post. Attach each strand of barbed wire to each post. Drive staples diagonally to the grain of the wood and do not drive so tightly as to bind the wire against the post.

Attach wooden plank to posts as follows:

- a. Fasten wooden plank fencing to each steel post by using pipe clamps. The clamps must fit snugly around the post and the carriage bolt head must be on the same side as the livestock. Each wooden plank must be long enough to span 3 posts so as to stagger the joints on one post, except at fence corners and ends as shown on the drawings.
- b. Use galvanized screws or galvanized nails with a minimum length of 2-1/2 inches to fasten wooden plank fencing to wooden posts. Use a minimum of 2 screws or nails to fasten the wooden planks to each post.

## **6. Fencing at depressions**

Where fencing is installed parallel to the ground surface, anchor the line posts in the depression that are subject to upward pull by means of extra embedment as specified in the IR or the Specific Site Requirements section, or by special anchors acceptable to the approving official.

Where the fence is installed with the top wire straight across the depression, use extra length posts to allow post embedment at the specified depth. Unless otherwise specified in the IR or the Specific Site Requirements section, close extra space between the bottom of the fence and ground with additional strands of barbed wire,

woven wire or wooden planks, or other rot-resistant material acceptable to the approving official, and properly anchor.

## **7. Crossing watercourses**

Where fence crosses watercourses in the locations shown on the drawings, end the fence at the top of the streambank on each side with an appropriate brace assembly. From separate posts driven next to the brace assembly but not wired to it, construct a separate section of fence across the watercourse, as shown on the drawings. Utilize battens for intermediary line posts as shown or specified.

At designated crossing locations, construct a special structure, such as a swing gate, breakaway fence, or flood fence, as shown on the drawings.

## Specific Site Requirements

