

TWO POSTS BRACE ASSEMBLIES FOR ENDS AND CORNERS - SPECIFICATIONS

Use for the following conditions:

- 5 or more wires - Standard Wire Fences (non-electric and electric) and suspension fences
 - ✓ Length of pulls not to exceed 660' (clay or loam soils)
 - ✓ Length of pulls not to exceed 330' (sands or prolonged wet soils)
- 4 or less wires - Standard Wire Fences (non-electric and electric) and suspension fences
 - ✓ Length of pulls not to exceed 1320 feet (clay or loam soils)
 - ✓ Length of pulls not to exceed 660' (sands, rocky or prolonged wet soils)
- Woven Wire Fences - Length of pulls not to exceed 660'

GENERAL SPECIFICATION FOR WOOD AND STEEL PIPE

Wood Posts - Must be new, sound and free from decay. Except for red cedar, mesquite, Osage orange, catalpa, and black locust, all wood posts shall be treated with a preservative approved by either Federal Specification TT-W-571 or the American Wood Preservers Association (AWPA).
Steel Pipe - May be new or used, of good quality, free of rust and pitting, and painted or galvanized for rust resistance. Posts will have the top permanently capped to prevent rainfall from entering the post.

ANCHOR and BRACE POSTS

Wood: 6" top diameter, round posts only
Steel Pipe: 2 1/2" nominal (2 7/8 OD), Schedule 40 (5.8 lb/ft)
Depth: 42" (3 1/2 feet). Steel posts when not driven will be centered in a hole that is a minimum of 12 inches in diameter and filled with concrete. The hole will be completely filled and crowned (mounded) at post base to prevent water from ponding around post at ground level.

Minimum posts lengths will allow for required buried depth and fence height plus at least 2 inches of post above top wire.
Attaching wire to Anchor / Pull Posts: For *standard wire fences*, wires will be attached to anchor (pull) posts by two complete wraps around post, stapled (wood posts) or wired (steel posts) and ends tightly twisted around stretched wire at least six times. For *woven or mesh wire*, determine amount of wire needed to fully wrap around post twice then remove enough vertical stays to provide the length needed. The wire ends are then attached as described above.

WOOD BRACE MEMBERS

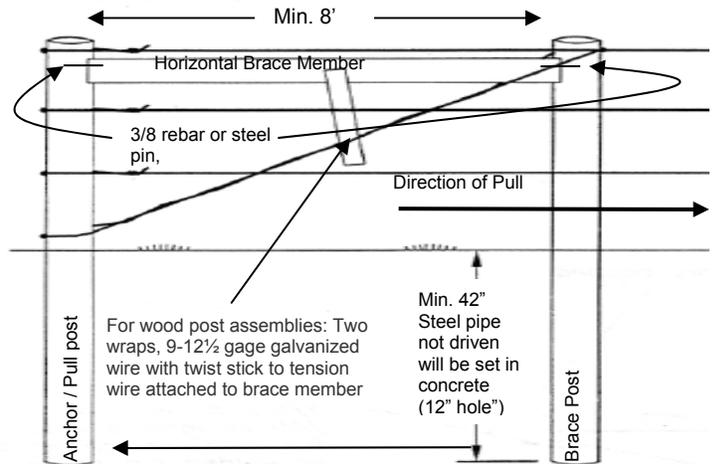
Size: 4" diameter, round posts only **Length:** Minimum 8 feet
Height: Minimum 3 feet above ground and no closer than 8 inches from top of post
Installation: The brace post and anchor posts should be notched to achieve a secure fit and the compression brace attached using 3/8 rebar or steel dowel pin (drilled to fit, and at least 2 inches into each post).

Tension / Brace (guy) Wires: Will be twisted or strained with a twist rod, 18"- 24" long and will remain in place approximately midway along brace wire. Brace wire will be double wrapped and stapled to brace post at height 4-6 inches above brace member and anchor (pull) post at a point no more than 4 inches above the ground level.

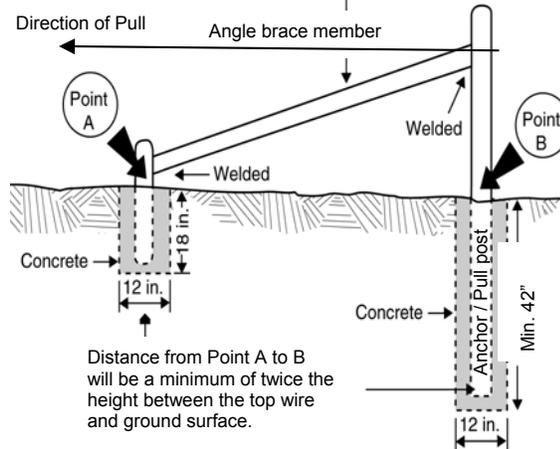
STEEL BRACE MEMBERS

Size: 2" nominal (2 3/8 OD), Schedule 40 (3.65 lb/ft)
Length: Horizontal - Minimum 8 feet; Diagonal brace members will depend on distance between anchor (pull) post and brace post (stub).
Height: Minimum 3 feet above ground but can be at top of post since it will be welded in place.
Installation: Steel brace members in conjunction with wood anchor and brace posts will be installed into a 3/4 - 1 inch notch in brace posts. Steel assemblies will be welded and painted for rust protection. Diagonal braces will be welded to stub set in concrete.

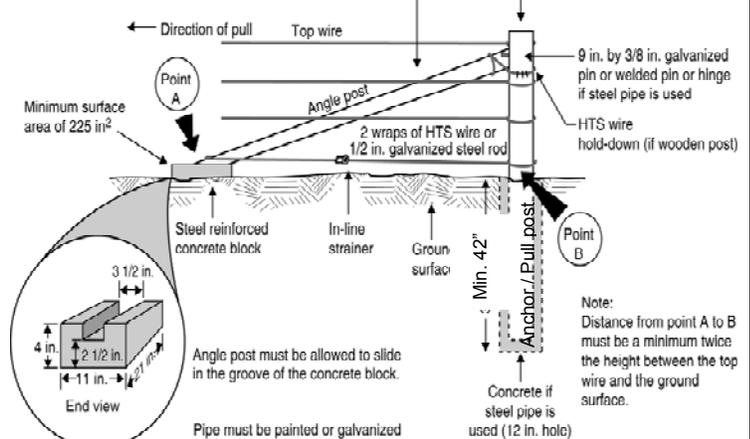
Single "H" Brace Assembly – Wood or Steel



Two Post Angle Brace – Steel, Welded



Slip Brace Assembly (not for woven wire)



THREE POSTS BRACE ASSEMBLIES FOR ENDS AND CORNERS - SPECIFICATIONS

Use for the following conditions:

Used when fence loads or soil conditions required increased brace strength.

- Standard Wire Fences (non-electric and electric) and suspension fences - 5 or more wires
 - ✓ Length of pulls not to exceed 1320' (clay or loam soils)
 - ✓ Length of pulls not to exceed 660' (sands, rocky or prolonged wet soils)

GENERAL SPECIFICATION FOR WOOD AND STEEL PIPE

Wood Posts - Must be new (never before used), sound and free from decay. Except for red cedar, mesquite, Osage orange, catalpa, and black locust, all wood posts shall be treated with a preservative which is approved by either Federal Specification TT-W-571 or the American Wood Preservers Association (AWPA).

Steel Pipe - May be new or used, of good quality, free of rust and pitting, and painted or galvanized for rust resistance. Posts will have the top permanently capped to prevent rainfall from entering the post.

ANCHOR and BRACE POSTS

Wood: 6" top diameter, round posts only

Steel Pipe: 2 1/2" nominal (2 7/8 OD), Schedule 40 (5.8 lb/ft)

Depth: 42" (3 1/2 feet). Steel posts when not driven will be centered in a hole that is a minimum of 12 inches in diameter and filled with concrete. The hole will be completely filled and crowned (mounded) at post base to prevent water from ponding around post at ground level.

Minimum posts lengths will allow for required buried depth and fence height plus at least 2 inches of post above top wire.

Attaching wire to Anchor / Pull Posts: For *standard wire fences*, wires will be attached to anchor (pull) posts by two complete wraps around post, stapled (wood posts) or wired (steel posts) and ends tightly twisted around stretched wire at least six times. For *woven or mesh wire*, determine amount of wire needed to fully wrap around post twice then remove enough vertical stays to provide the length needed. The wire ends are then attached as described above.

WOOD BRACE MEMBERS

Size: 4" diameter, round posts only,

Length: Minimum 8 feet

Height: Minimum 3 feet above ground and no closer than 8 inches from top of post

Installation: The brace post and anchor posts should be notched to achieve a secure fit and the compression brace attached using 3/8 rebar or steel dowel pin (drilled to fit, and at least 2 inches into each post).

Tension / Brace (guy) Wires: Will be twisted or strained with a twist rod, 18"- 24" long and will remain in place approximately midway along brace wire. Brace wire will be double wrapped and stapled to brace post at height 4-6 inches above brace member and anchor (pull) post at a point no more than 4 inches above the ground level.

STEEL BRACE MEMBERS

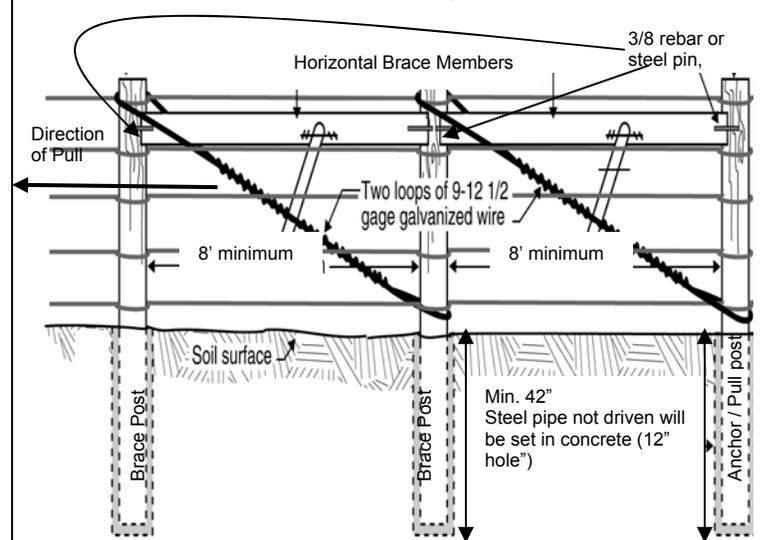
Size: 2" nominal (2 3/8 OD), Schedule 40 (3.65 lb/ft)

Length: Horizontal - Minimum 8 feet; Diagonal brace members will depend on distance between anchor (pull) post and brace post (stub).

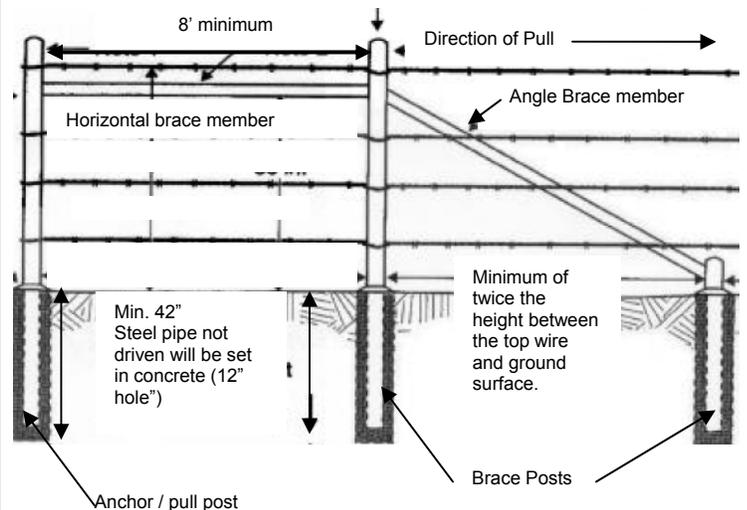
Height: Minimum 3 feet above ground but can be at top of post since it will be welded in place.

Installation: Steel brace members in conjunction with wood anchor and brace posts will be installed into a 3/4 - 1 inch notch in brace posts. Steel assemblies will be welded and painted for rust protection. Diagonal braces will welded to stub set in concrete.

Double "H" Brace Assembly – Wood or Steel



Three Post Angle – Steel, welded



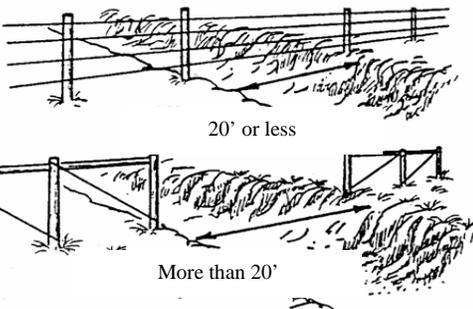
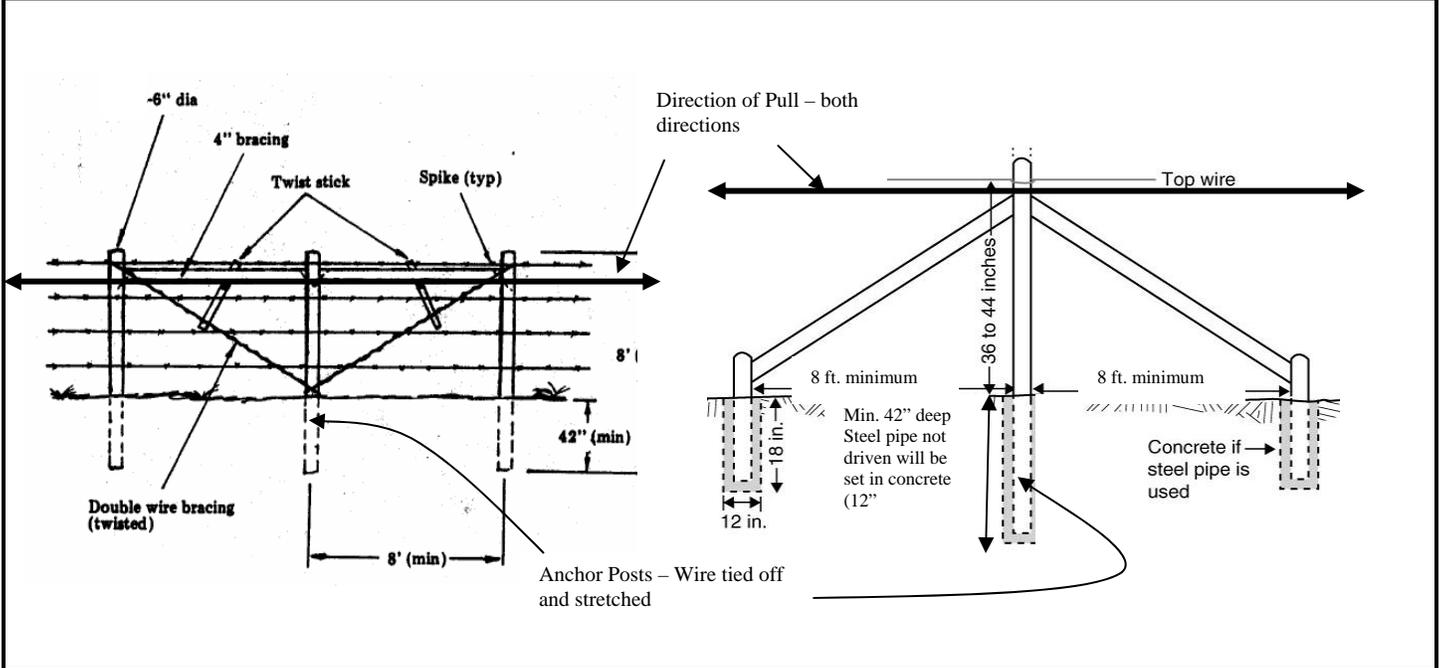
IN-LINE PULL POST ASSEMBLIES - SPECIFICATIONS

In-Line Pull Post Assemblies

Used in straight sections of the fenceline with pulls in both directions where the distance between anchor (pull) posts of corners or ends exceeds the maximum specified lengths of pull. They allow for a point in which the wire can be tied off and stretched. They are also used where there are sudden changes in elevations, such as at the bottom and top of steep slopes, or on both sides of drainages / water gaps.

- Standard Wire Fences (non-electric and electric) and suspension fences
 - ✓ Length of pulls not to exceed 1320'
- Woven Wire Fences
 - ✓ Length of pulls not to exceed 660'

Specifications for materials and installation will be the same as for all other brace assemblies



Braces for crossings at watercourses and drainages:

Less than 20 feet wide - wires may continue across the depression (not tied off / anchored) with normal line posts on each side.

Greater than 20 feet wide - Install end braces on each side of the crossing. This will require the main fence line wires to be tied off and anchored on each side of the crossing and then wires are added in between the end braces, to complete the fence line across (elevated) or through the crossing (wide, shallow). Line posts in low areas that are subject to lifting out may require anchoring by use of concrete or weights.

To prevent animals from crossing under the fence, **water gaps** will be installed. For areas with very little water and only occasional flooding, a **breakaway** fence added below the main fence wires should be adequate. These are designed so that in the event they are damaged or wash out, the main fence is not damaged and these can be easily replaced. In areas subject to regular flooding, **flood gates** should be attached below bottom wire and will be designed to allow water and debris to pass and still control livestock. Some type of hinged or breakaway floodgate works best. These are typically made of treated wood or livestock panels.

