United States Department of Agriculture
Natural Resources Conservation Service

Fence

Non-Electric Fence

Virginia Conservation Practice Job Sheet ***Code 382(d)***

Definition
A constructed barrier to animals or people.

Purpose
This job sheet is provided as a component of a resource conservation plan. This practice facilitates the accomplishment of conservation objectives by providing a means to control movement of animals and people, including vehicles.

Conditions Where Practice Applies
This practice may be applied on any area where management of animal or human movement is needed. Conservation plan maps showing the approximate fence location, complementary conservation practices, other relevant information, and additional specifications may be included.

General Criteria and Specifications
Fencing materials, type and design of fence installed shall be of a high quality and durability. The type and design of fence installed will meet the management objectives and site challenges. Based on need, fences may be permanent, portable, or temporary.

Position fences to facilitate management requirements. Plan ingress/egress features such as gates and cattle guards.

Plan and install fence to provide the desired control, life expectancy, and management of animals and people of concern by using the appropriate fence height, size, wire spacing and type of materials.

Use the VA Materials and Construction Specifications and this Job Sheet to plan, design and construct the appropriate type of fence to meet project needs.

Design and install fences to meet the life expectancy of the practice and to comply with all federal, state and local laws and regulations.

Landscape timbers shall not be used for any part of a fence system.

Fence Type

High tensile smooth wire fence can be used as a multi-strand permanent fence for both perimeter and subdivision purposes. It can be used to control cattle with proper wire spacing and tension. Smooth wire may be steel or vinyl coated. High tensile smooth non-electric fence is not recommended for goats, sheep, hogs and other small animals unless confinement is not a concern.

Specific information regarding allowable materials and construction for line posts, brace posts, brace assemblies, brace rails, fence wire, staples, fasteners, splicing, gates and other considerations are explained in detail in the text and Tables 1-9 of the Fence Materials and Construction Specifications.

Non-Electric Fence Job Sheet — Code 382(d)

Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See Conservation Practice Standard *Fence* (382) and the Fence Materials and Construction Specification. Additional provisions are entered on the job sketch sheet.

Client/Operating Unit:	**Farm #:**
Field(s):	**Tract #:**
Planned By:	**Location:**
Date:	**Length of Fence:**
Landowner Objectives:	

Purpose (check all that apply)	
☐ Control the movement of animals	☐ Control the movement of equipment or vehicles
List type of animals controlled:	

Fence Type Non-Electric High Tensile				
Use	# of Strands	Strand Spacing	Fence Height	Tension Required
Perimeter				
Travel Lane				
Interior Subdivision				
Surface water Exclusion				

Wire Type	**Coating**
☐ High Tensile (HT), galvanized steel, smooth wire ☐ Aluminum ☐ Other _____	Size (gauge) _____ Coating _____ Wire Strength (lbf or psi) _____

Line Posts

Material Type _____ Diameter (in.)/weight _____

Shape _____ Length _____ Coating (if applicable) _____

Max post and/or stay spacing _____ Depth in ground _____

Other notes:

Brace Posts	Brace (Guy) Wire
● Material _____ ● Size/diameter and length _____ (Corner, ends, pull, and gate posts) ● Size/diameter and length _____ (all other brace posts) ● Depth _____	□ 12.5 ga., galvanized steel, HT double wrapped □ 9 ga., galvanized steel, soft wire single wrap □ A single 3/16" galvanized cable with cable lock

Horizontal Brace Rail	Diagonal Brace Rail
● Material _____ ● Size (diameter and length) _____ ● Height from ground _____	● Material _____ ●Size (diameter and length) _____ ● Height of anchor post above ground _____

Operation and Maintenance

Inspections and maintenance are required to achieve the intended function, benefits, and life of the practice. The landowner/operator is responsible to establish and implement an inspection and maintenance program. Regular inspection of fences should be part of an ongoing maintenance program. Items to inspect and maintain during the 20-year design life of the practice include, but are not limited to, the following:

1. Inspect fences after storm events to ensure the continued proper function of the fence. Promptly repair or replace damaged or broken fencing.
2. Retain and properly discard all broken fencing material and hardware to prevent ingestion by animals or injury to equipment, people, or animals.
3. Remove debris collected in the fencing.
4. Clear brush and vegetation from fence lines.
5. Remove fallen limbs from fence wires. Overhanging trees and limbs should be trimmed or removed as needed.
6. Maintain proper tension on the fence wires.
7. All necessary precautions should be taken to ensure the safety of construction and maintenance crews.

Other:

Planner Certification

The Fence practice planned in this job sheet fulfils minimum requirements of VA NRCS Practice 382(d)

_____ _____ _____

Signature Title Date

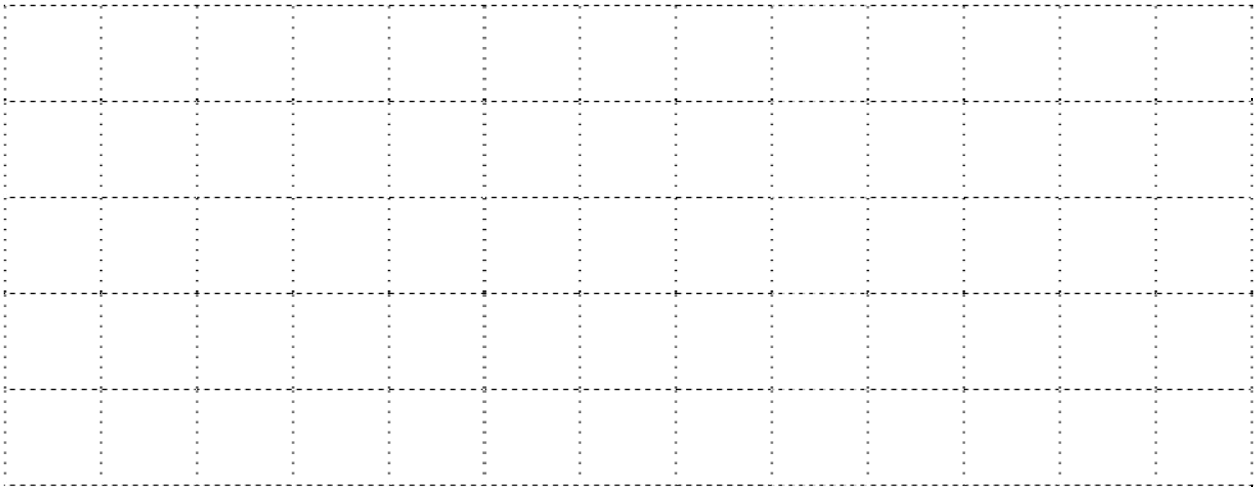
Certification of Practice Completion

The Fence practice planned in this job sheet has been completed according to NRCS specifications (indicate in Practice Specifications any changes to planned activities).

_____	_____	_____
Signature	Title	Date

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

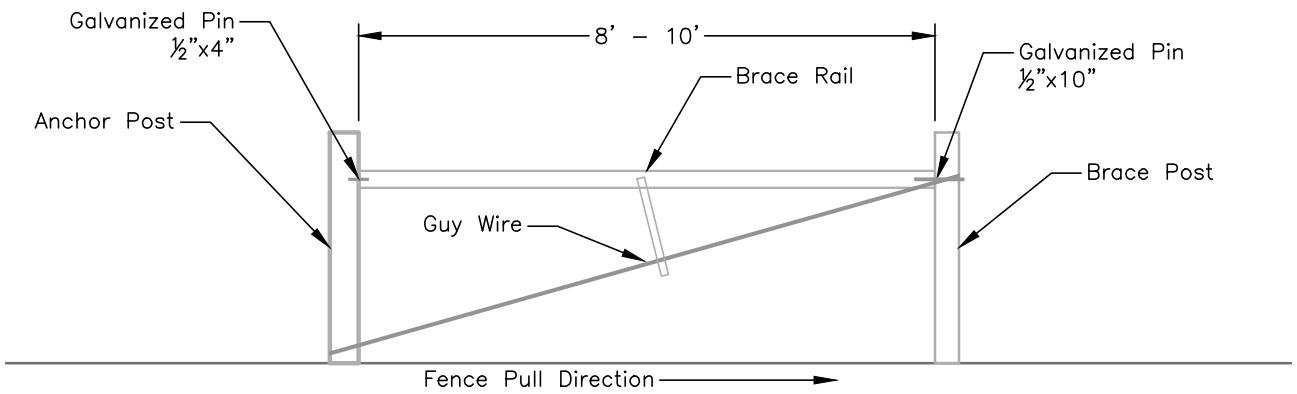
Scale 1"= _____ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



Additional Specifications and Notes:

Clear Form

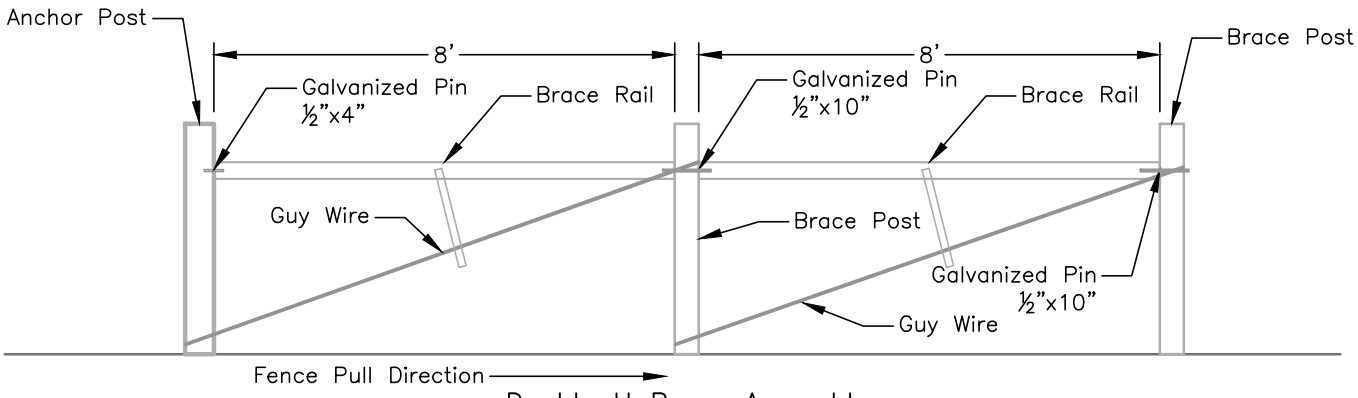
High Tensile Smooth Wire Non–Electric Fence
Construction and Installation Drawings



H Brace Assembly

Construction Notes

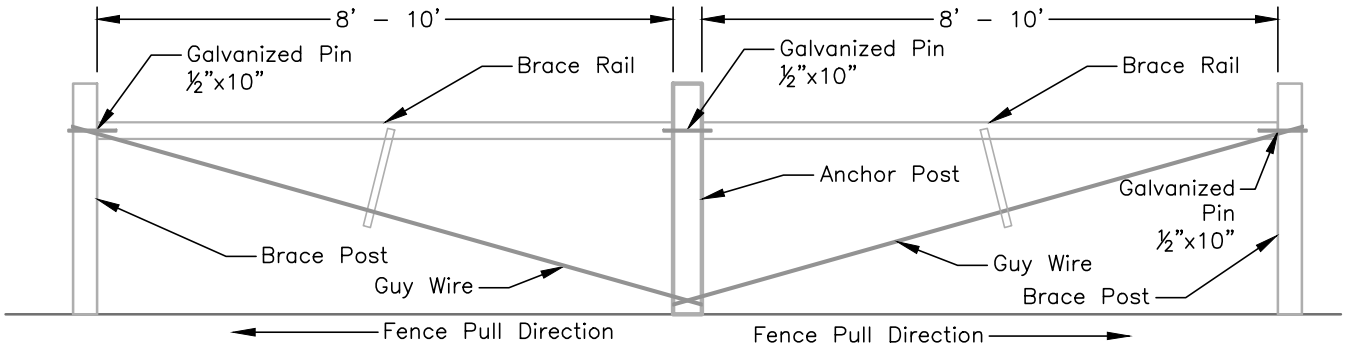
1. Brace width will be a minimum of 2 times the height of the top fence wire above the ground. (2½ times is preferred)
2. See Table 5 for corner, gate, and end post size and depth requirements.
3. Tension guy wires with a fence wire tightener or a treated twist stick approximately in the middle of the guy wire.
4. For guy wires, use 2 complete loops of 12½ ga. HT wire or a single strand of 9 ga. soft wire.
5. Brace rail should be between the top two fence wires, approximately 4" from the top of the post.



Double H Brace Assembly

Construction Notes

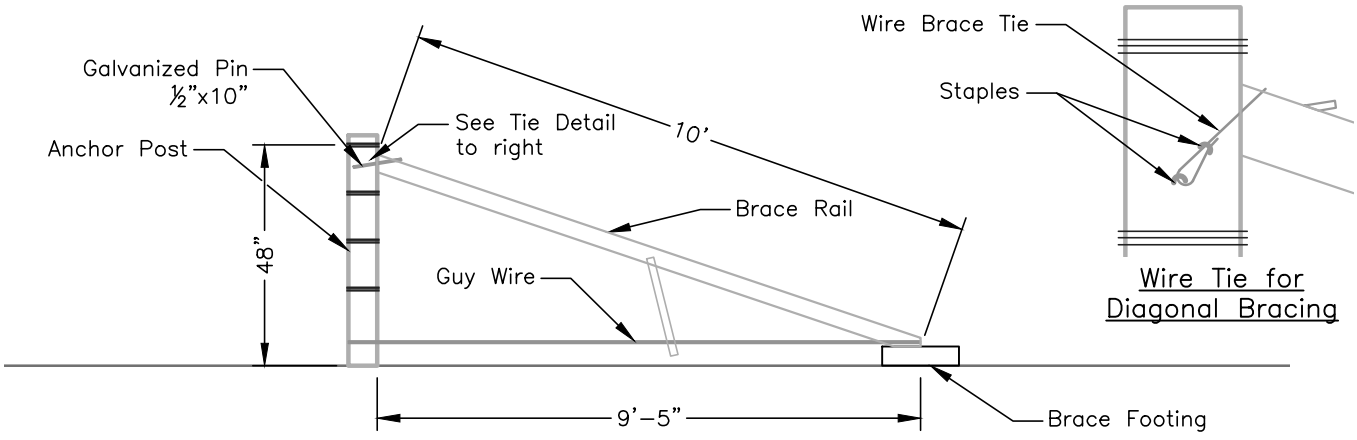
1. Brace width will be a minimum of 2 times the height of the top fence wire above the ground. (2½ times is preferred)
2. See Table 5 for corner, gate, and end post size and depth requirements.
3. Tension guy wires with a fence wire tightener or a treated twist stick approximately in the middle of the guy wire.
4. For guy wires, use 2 complete loops of 12½ ga. HT wire or a single strand of 9 ga. soft wire.
5. Brace rail should be between the top two fence wires, approximately 4" from the top of the post.



In–Line Pull Post Assembly

Construction Notes

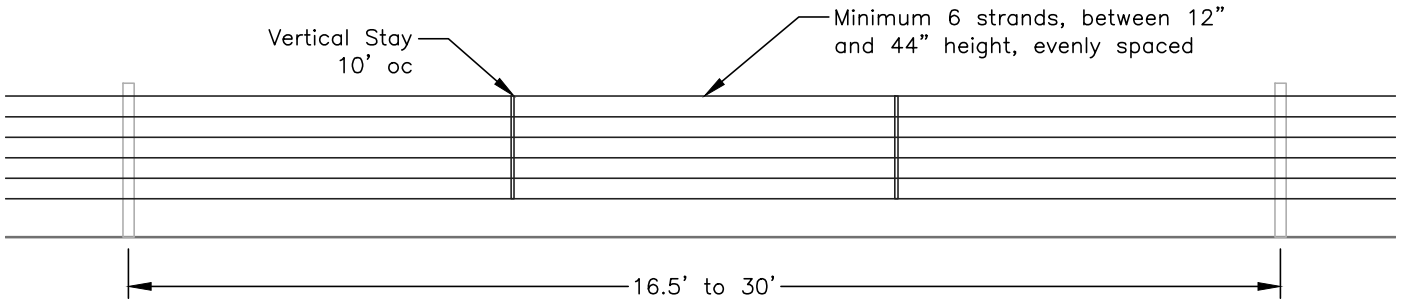
1. Brace width will be 2½ times the height of the top fence wire above the ground.
2. See Table 5 for corner, gate, and end post size and depth requirements.
3. Tension guy wires with a fence wire tightener or a treated twist stick approximately in the middle of the guy wire.
4. For guy wires, use 2 complete loops of 12½ ga. HT wire or a single strand of 9 ga. soft wire.
5. The fence wire shall be cut and tied off at the anchor post and start a new fence wire for the next fence section.
6. Brace rail should be between the top two fence wires, approximately 4" from the top of the post.



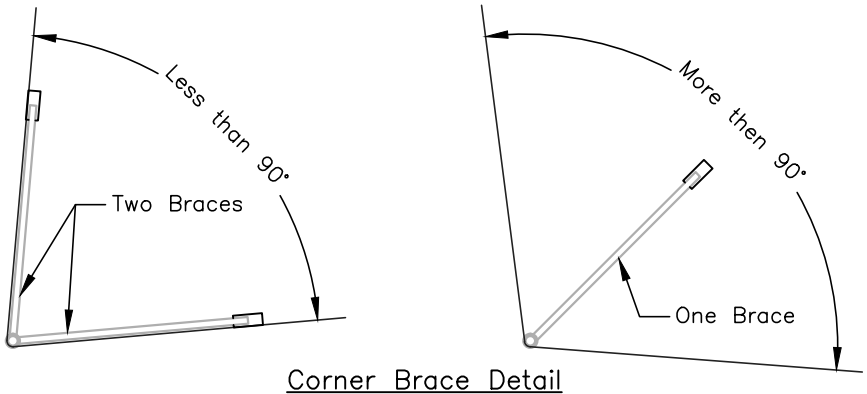
Typical Diagonal Floating Brace Assembly

Construction Notes

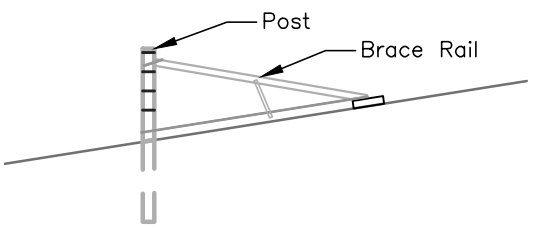
1. Diagonal brace member length will be 2½ times the height of the top fence wire above the ground.
2. See Table 5 for corner, gate, and end post size and depth requirements.
3. Tension guy wires with a fence wire tightener or a treated twist stick approximately in the middle of the guy wire.
4. For guy wires, use 2 complete loops of 12½ ga. HT wire or a single strand of 9 ga. soft wire.
5. The brace footing shall have 100 square inches of ground contact, at a minimum.
6. The footing shall be 2" to 4" thick and can be concrete block, paving stone or a flat rock.
7. A diagonal floating brace can be substituted at corner, gate, end post H brace assemblies and in–line pull assemblies.



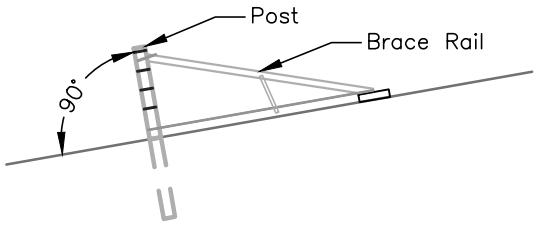
In–Line High Tensile Non–Electric Fence Construction Detail



Corner Brace Detail
Options

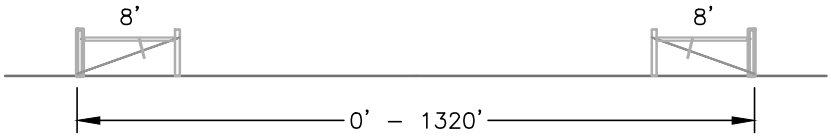


Posts on Slopes
Up to 21% Slope

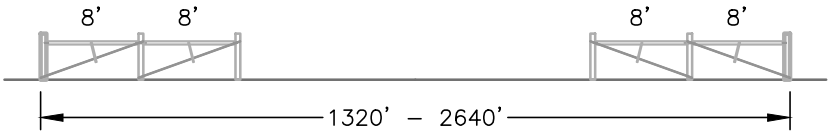


Posts on Slopes
More Than 21% Slope

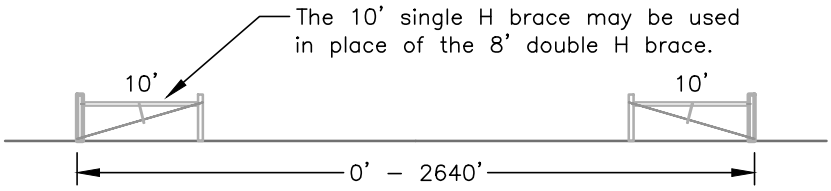
Single and Double H Brace Assembly Position and Construction for High Tensile Smooth Non–Electric Wire Fence



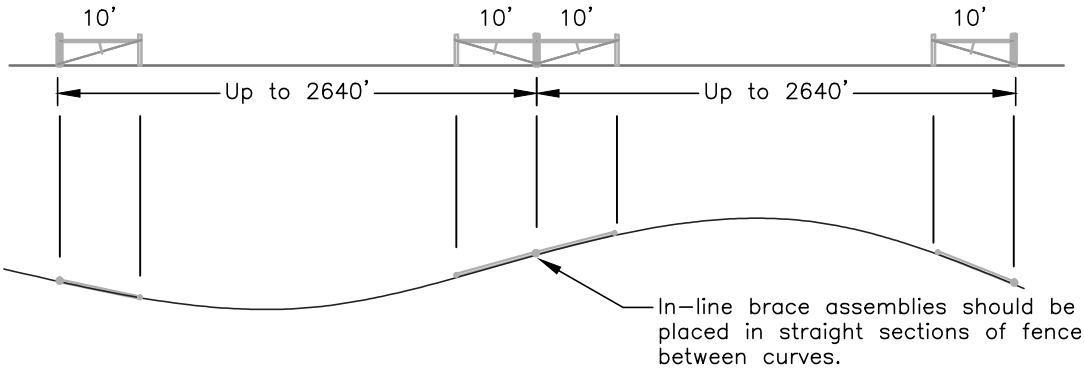
Single H Brace Assembly



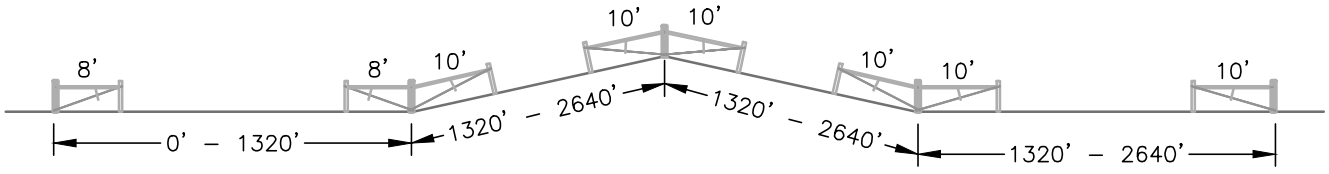
Double H Brace Assembly



Single H Brace Assembly

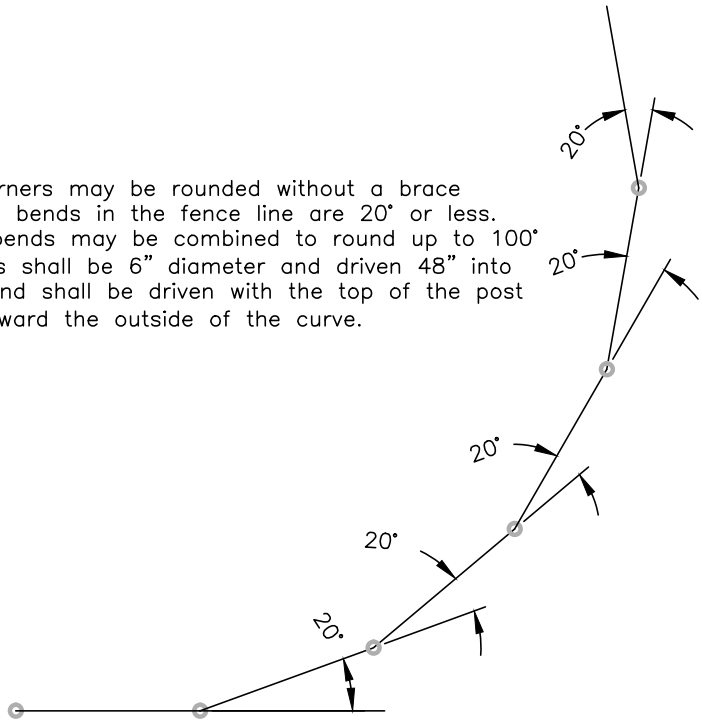


Curved Fence on Flat Land

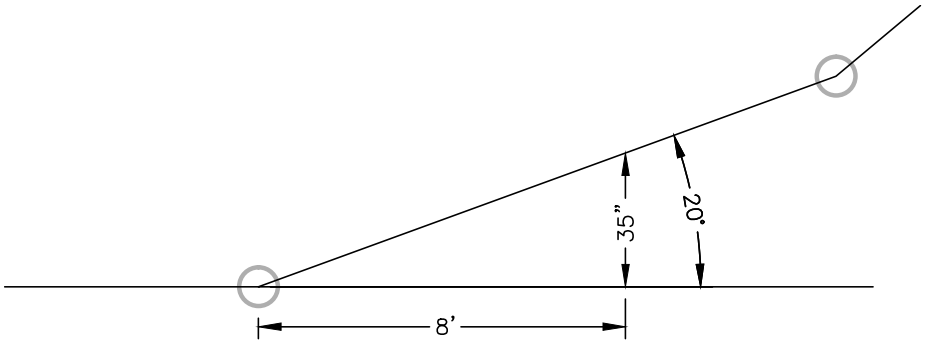


Straight Fence on Rolling Land

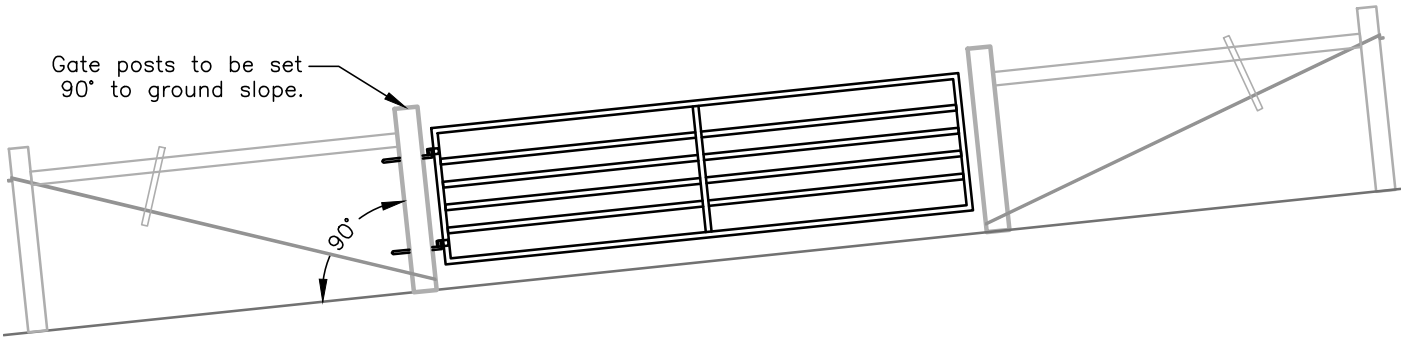
Curves or corners may be rounded without a brace system if the bends in the fence line are 20° or less. Multiple 20° bends may be combined to round up to 100° bends. Posts shall be 6" diameter and driven 48" into the ground and shall be driven with the top of the post leaning 4" toward the outside of the curve.



Rounding Sharp Corners or Curves

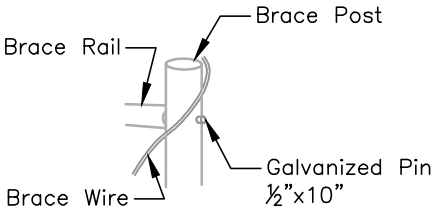


Determining Angle of Direction Change

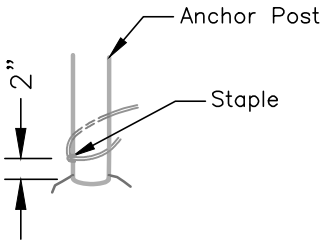


Hanging Gates

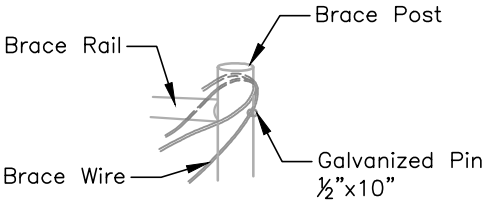
Brace Assembly Construction Detail



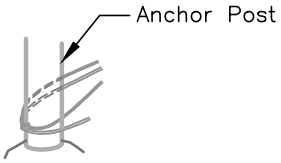
Wrap brace wire around brace post above protruding galvanized pin on opposite side from brace.



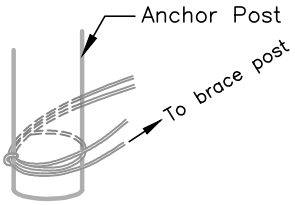
Drive a staple to half its length into anchor post about 2" from ground line opposite side of brace.



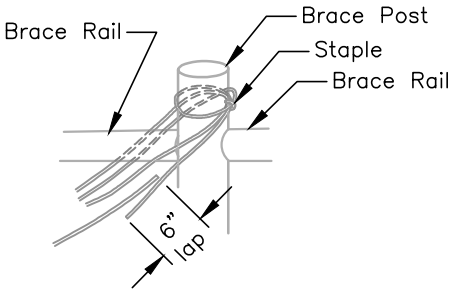
Unroll enough brace wire for two complete loops around anchor and brace post.



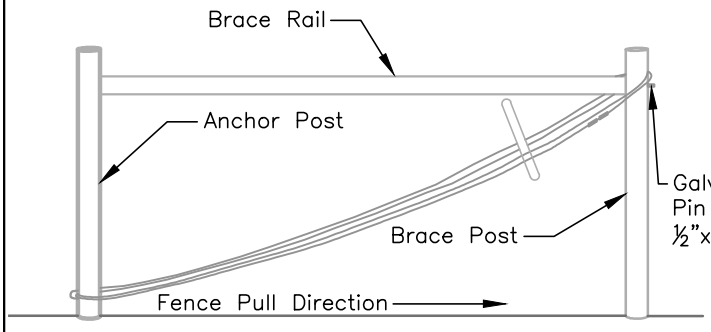
Thread end of brace wire through one staple and then through the other. Repeat to from three wire strands.

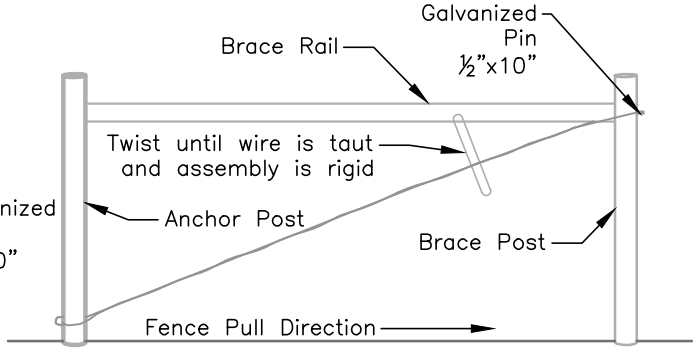


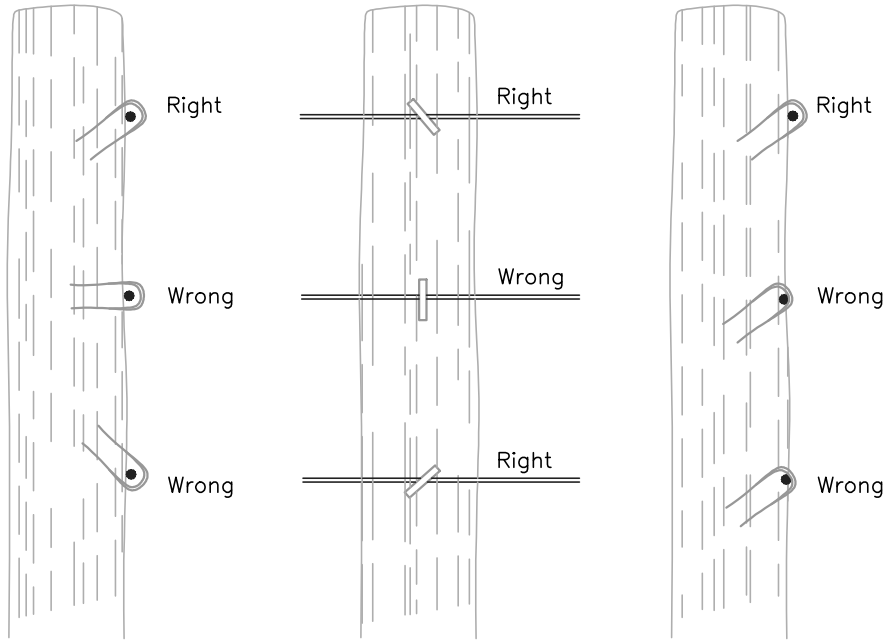
Wrap wire around anchor post and return toward brace post.



Cut brace wire from roll allowing enough wire to wrap around brace post and extend 6" to 12" past other wire end. Make splice.





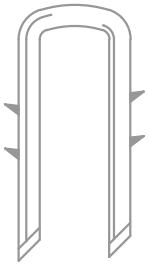


Drive staples at a downward angle.

Do not drive staples parallel to side of post.

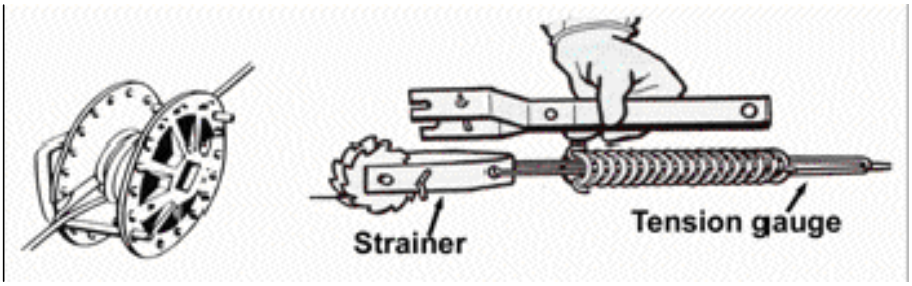
Leave wire loose in staple.

Wire Attachment Details

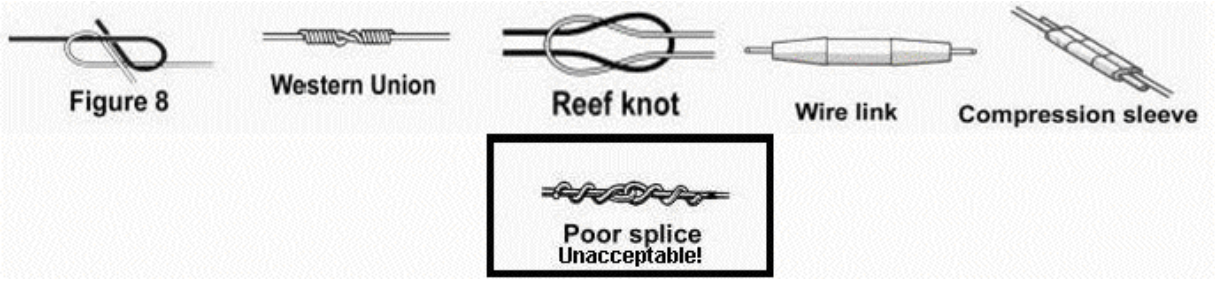


No. 9 gauge, Class 3 galvanized staple, 1½" minimum, barbed is strongly recommended.

Staple Detail

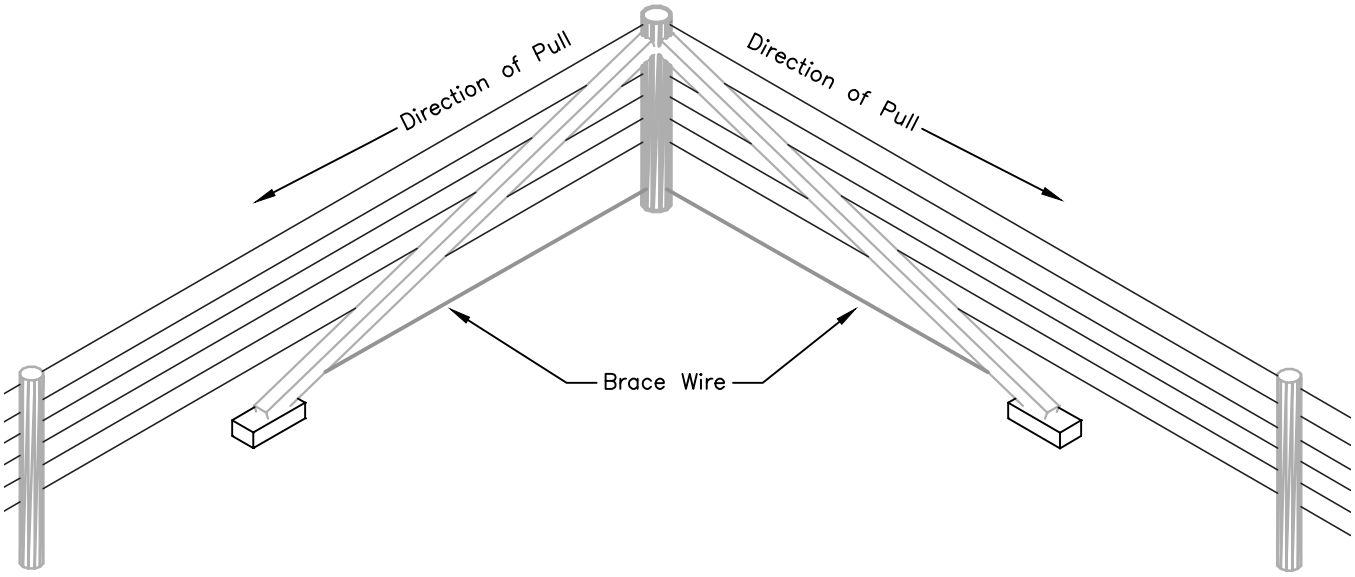


Wire Strainer and Tension Components

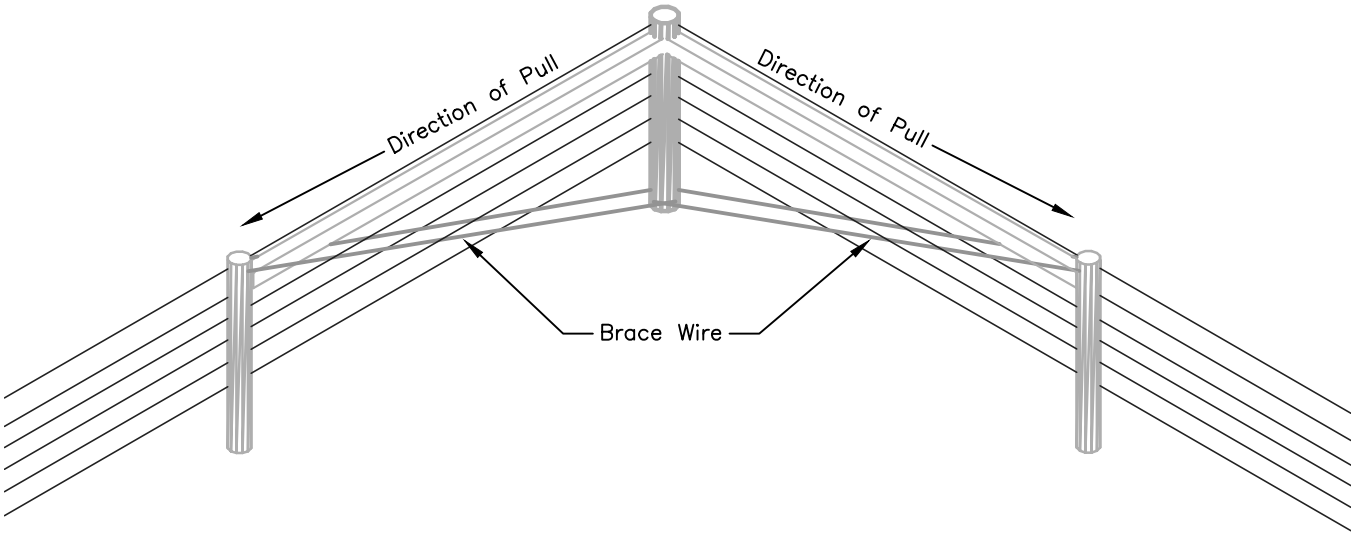


Wire Splice Options Details

Typical Corner Brace Assembly



Diagonal Floating Brace Option



H Brace Option