

USDA FOREST SERVICE, R-4 PROJECT

SECTION 323160 – LAY DOWN BARBED WIRE FENCE AND GATES

PART 1 - GENERAL

1.1 SUMMARY

- A. This item shall consist of furnishing and erecting wire fences and gates of the type required in accordance with these specifications and details shown on the drawings, at the locations designated in reasonably close conformity with the lines shown on the drawings or established on the ground.

1.2 REFERENCE SPECIFICATIONS

- A. The publications listed below form a part of this specification to the extent reference. The publications are referred to in the text by the basic designation only.
 - 1. ASTM A121 Standard Specification for Zinc-Coated (Galvanized) Steel 2 Barbed Wire.

1.3 SUBMITTALS

- A. Preservative retention test results shall be forwarded to the Contracting Officer with the "Certificate of Inspection of Treatment."

1.4 MEASUREMENT AND PAYMENT

- A. Payment for wire fence will be measured by the linear foot between centers of end posts excluding the length between centers of gate posts along the slope of the bottom wire completed in place and accepted.
- B. Wire gates will be measured by the number of each type installed in place and accepted.

PART 2 - PRODUCTS

2.1 POSTS, BRACES AND STAYS

- A. All Materials will be provided

2.2 WIRE

- A. Wire will be provided

2.3 STAPLES

- A. Staples shall be 9 gauge or heavier and have a minimum length of 1-1/2 inches.

2.4 SPIKES

- A. Spikes shall be 60d zinc-coated, steel-wire nails.

PART 3 - EXECUTION

3.1 CLEARING

All trees, brush and other obstacles which interfere with proper construction and maintenance of the fence shall be removed in advance. Material removed shall be removed at ground level with minimum disturbance to soil surface to protect aesthetics and prevent erosion. Slash from clearing the fence line will be scattered away from the fence line. (See Section 311000 – Fence-Line Clearing and Grubbing).

3.2 GENERAL

- A. Grading along the fence line is not required. In general, the fence shall be erected on the undisturbed, natural ground. Fence wires shall not be attached to trees. Fences shall be reasonably straight and shall not deviate more than 12 inches between corner, gate or line brace assembly.
- B. Install fencing as staked in field by Contracting Officers Representative.
- C. When a fence line approaches a ditch, gully, or depression, the last post on level ground shall be placed close enough to the edge of the drop-off that the wire may be strung to a post in the depression without touching the ground.
- D. When the depth of a depression on a fence exceeds the total vertical wire spacing over a maximum horizontal run of 2 spaces, an extra fence shall be constructed through the depression or sag bracing installed. These short fences can be permanently wired to line posts.

3.3 POSTS

- A. Space interval between posts shall be 16 feet.
- B. Posts shall be steel post with every sixth post being a wood post.
 - 1. 4" minimum diameter wood posts will be required. Post spacing shall be the same for wood and steel.
- C. All wood posts (corner braces and line braces) shall be set solidly in soil to depths shown on drawings (2.5 feet deep).
- D. All steel posts (line posts) shall be driven past the top of the anchor plate.
- E. Stays shall be placed at each line post and secured with a loop of tie wire at the top and fastened to the bottom to allow the fence to lay down each year (wire wrapped around the stay, twisted several times then wrapped around the line post with a bit of slack to allow the stay post to lay down).

3.4 BRACES

- A. Corner braces will be located at every change in fence line direction.
- B. Line braces shall reinforce fence-line structure and anchor long wire stretches which shall not exceed 300 foot distances. Braces shall be placed at abrupt changes in vertical topography (15 degrees or more change in elevation).
- C. Line braces shall also be located at both sides of all gates.
- D. Bracing shall be notched 1" into posts and spikes used to anchor them together. Pre-drill spike holes 1/16th inch smaller than spikes to avoid splitting posts and braces.
- E. Tension wires shall be mortised into posts, stapled, and twisted tight, leave tensioning sticks installed.

3.5 WIRE

- A. Wire shall never be kinked or nicked, and shall be pulled tight with due consideration for contraction and expansion.
- B. Wire spacing shall be as shown on the drawings. The wire shall be attached on the side of the post where the greatest pressure from cattle exists (uphill).
- C. All line wires shall be dead-ended on gate, corner, angle, and line brace posts. The ends are to be wrapped twice around the post, stapled securely, and twisted back on the stretched wire six times.
- D. Wire splices shall be wrapped six times. The wraps shall be adjacent to each other to form neat, tight wraps.

3.6 WIRE FASTENERS

- A. Barbed wire shall have one staple per wire per on brace post. Staples shall be driven into wooden posts angled somewhat to cross the grain.
- B. Staples shall be driven into brace posts so that wire will not move, but not so deep as to nick wire.
- C. Wire shall be wired to wood stays.

3.7 GATES

- A. Gates shall be 12 feet wide in length except at walk thru gates on trails.
- B. Gates shall have the same wire spacing as the fence.
- C. Smooth wire shall be used for loops.

END OF SECTION 02822

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