

FENCE (power) SPECIFICATION SHEET

Client		Date	
Farm/Tract		Field(s)	
Location		Length(s)	
Planner		County/SWCD	

1. Management Objectives:

Additional Narrative:

2. Type of Fence (check all that apply):

<input type="checkbox"/>	2-Wire	<input type="checkbox"/>	3-Wire	<input type="checkbox"/>	4-Wire	<input type="checkbox"/>	5-Wire
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3. Additional Specifications:

Narrative:

See attached designs, drawings, and/or maps.

4. CONSTRUCTION SPECIFICATIONS

GENERAL

Installation shall be in accordance with an approved plan. Details of construction shown on the drawings but not include herein are considered as part of these specifications. Construction activities shall be in accordance with applicable OSHA regulations.

Prior to construction the fence lines shall be cleared of any possible obstruction that would hinder the fence placement and operation.

The soil surface along the fence line shall be relatively smooth such that placement of the bottom fencing member does not exceed the maximum fence member to soil surface spacing specified.

The fence materials shall have an expected life of at least 10 years with routine maintenance. All wood materials except Orange Osage, Western Red Cedar, Juniper and Black Locust that have contact with the soil shall be treated with an EPA-registered wood preservative. Wood posts shall be treated from the butt end of the post to distance of at least 30 inches for line posts and 36 inches for all corner, gate, and brace posts. Refer to Table 1 for the life expectancy of treated versus untreated wood posts.

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MATERIALS

Fiberglass Posts: Fiberglass posts shall be of heavy duty specified material with a minimum diameter of 1 inch.

Wood Insultimber: Iron wood posts shall be a minimum of 1 inch square in dimensions.

Wood Posts: Line posts shall have a minimum top diameter of 3 inches and shall be a minimum of 6 feet in length. Corner, gate and brace posts shall have a minimum top diameter of 5 inches and shall be a minimum of 7 feet in length. Braces shall have a minimum top diameter of 4 inches and shall be a minimum of 6 feet in length.

Steel Posts: Steel line posts shall be the “T”, “U” or “Y” type with a welded or riveted anchor plate near the bottom (minimum 18 inches square area) and have suitable corrugations, knobs, studs or grooves to hold insulators for fastening the wire. Line posts shall weigh at least 1.33 pounds per linear foot of length and shall be a minimum of 5.5 feet long.

Wire: The grade of the wire shall be 12.5-gauge or heavier galvanized high tensile with a minimum tensile strength of 135,000 psi. Galvanizing shall be no less than Class III (0.8 oz. of zinc per square foot of surface).

Fasteners: Fasteners may be made of high quality glazed porcelain or UV resistant HDPE or HDPP plastic. Galvanized 9-gauge wire may be used on fiberglass and insultimber posts.

Table 1: Life Expectancy of Untreated and Treated Fence Posts (Years)

Kind of Wood				
Western Red Cedar	12-15	20-25	20-25	-
Lodgepole & Ponderosa Pine	2-4	20-25	15-20	10-20
Aspen or Cottonwood	1-3	15-20	10-15	5-10
Douglas Fir & Western Hemlock	3-6	20-35	15-25	10-20

Stays: Fiberglass stays shall be used; they shall consist of marble, fiberglass and high-polymer resins.

Energizer Units: The unit shall include a high impact self-insulating weather resist case, a snap-in circuit panel, a safety pace fuse, a lightning arrester, have full power input and reduced power output, be high power/low impedance with 5,000-volt peak output and have at least a 2.3 Joules charge and a pulse that is furnished within 300 millionths of a second. The unit shall operate on 110-volt, 220-volt electrical power or 12-volt battery or solar-powered system.

INSTALLATION

The fence shall be reasonably straight and shall not deviate more than 12 inches between any corner and gate or line brace assembly.

The line tension for all line wires shall not be less than 175 pounds per wire.

All power fences will be grounded with at least one ½-inch diameter galvanized rod.

Post Depth: Fiberglass line posts shall be set a minimum depth of 1.5 feet and wood line posts shall be set to a minimum depth of 2 feet, unless otherwise specified. Gate, corner and brace posts shall be set to a minimum depth of 3 feet, unless otherwise specified.

Post Spacing: The maximum post spacing interval shall be 50 feet on fences without fence stays and 100 feet with one stay between posts.

Line Bracing: Line brace assemblies shall be located at all corners, gates and abrupt changes in vertical topography (generally considered as 15 degrees). On straight reaches of fencing line braces shall be installed at a spacing of no more than 1300 feet.

Wire Spacing: Wire spacings are as follows, unless otherwise specified:

Table 2: Wire Spacing (Cattle Only Fence)

Fence Type	Spacing Measured From Groundline (inches)			
2-wire	18 -	30 +		
3-wire	18 +	26 -	36 +	
4-wire	12 -	20 +	28 -	38 +

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Table 3: Wire Spacing (Sheep Only Fence)

Fence Type	10 +	16 -	24 +	32 -	
4-wire					
5-wire	6 +	12 -	18 +	24 -	34 +

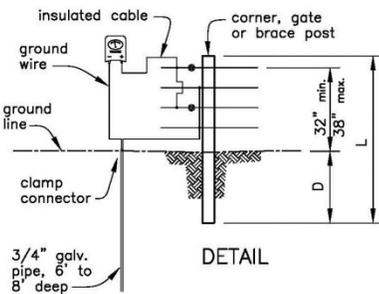
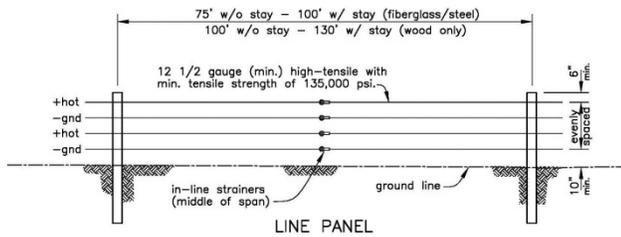
Note: On spacing (+) denotes charged wire and (-) denotes a ground wire. Where the free movement of antelope is a concern, the bottom wire shall always be a ground wire and alternate wires should be charged from the bottom wire.

Wire Fasteners: Fasteners shall be attached to the posts in such a manner so as not to cause grounding of the line wires.

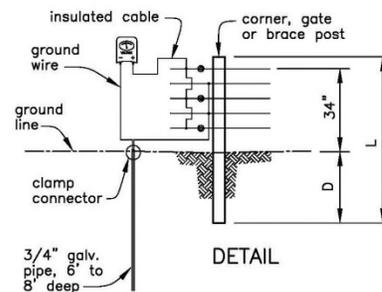
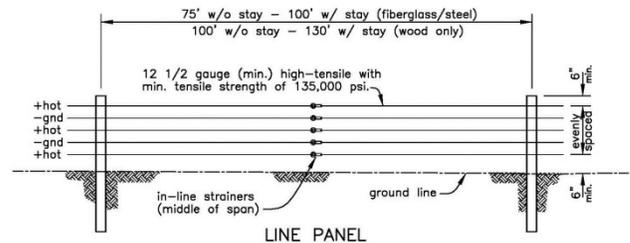
Stays: Stays shall be uniformly spaced between the posts as required for the specified post spacing.

Grounding Rods: All energizers must be grounded. Ground wires for the fence must be driven into the ground a minimum of 6 feet or additional grounding rods shall be added.

a) 4-Wire Electric Fence Details



5-Wire Electric Fence Details



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5. Operation and Maintenance:

Regular inspection of fences should be part of an ongoing maintenance program to ensure continuing proper function of the fence.

Operation and Maintenance (O&M) includes the following:

- A schedule for regular inspections and after storms and other disturbance events.

Maintenance activities:

- Repair or replacement of loose or broken material, gates, and other forms of ingress/egress
- Removal of trees/limbs
- Replacement of water gaps as necessary
- Repair of eroded areas as necessary
- Repair or replacement of markers or other safety and control features as required.

Additional Narrative:

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Design Approval:

Practice Code No.	Practice	Lead Discipline	Controlling Factor	Units	Job Class				
					I	II	III	IV	V
382	Fence	BCSD Graz Land Spec	Length	feet	All	All	All	All	All
			Animal Units	AUE	25	100	250	350	All
This practice is classified as Job Class (check one):									

Design Approved By: /s/ _____ Date: _____

Job Title: _____

Client's Acknowledgement Statement:

The Client acknowledges that:

- a. They have received a copy of the specification and understand the contents and requirements.
- b. It shall be the responsibility of the client to obtain all necessary permits and/or rights, and to comply with all ordinances and laws pertaining to the application of this practice.

Accepted By: /s/ _____ Date: _____

Certification:

I have completed a review of the information provided by the client and certify this practice has been applied as specified.

Certification By: /s/ _____ Date: _____

Job Title: _____

Refer to the Following Conservation Practice Specifications [✓]			
	Access Control 472		Prescribed Grazing 528
	Range Planting 550		Critical Area Planting 342
	Pipeline 516		Watering Facility 614
	Spring Development 574		Wetland Wildlife Habitat Management 644
	Upland Wildlife Habitat Management 645		Other:

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