

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
ARIZONA

CONSTRUCTION SPECIFICATION 636E
WATER HARVESTING CATCHMENT
ROCK OUTCROPPINGS OR PAVED AREAS

1 SCOPE

The work shall consist of cleaning and/or sealing the rock or pavement catchment apron, including constructing a barrier or diversion for collection of water and furnishing the materials.

2 GENERAL

The attached construction specifications required to complete the system, such as the watering facility (614), pipeline (516), structures for water control (587), etc. shall be considered a part of this specification. Installation shall be in accordance with the approved drawings, specifications and per product manufacturer or supplier's recommendations where applicable.

3. INSTALLATION

Installation shall be in accordance with the approved drawings, specifications and per product manufacturer or supplier's recommendations where applicable. No changes are to be made to the drawings or specifications without prior approval of NRCS.

3.1 Clearing:

Excess overburden shall be removed from the surface of the apron area. The surface of the apron shall be cleaned by water, air or mechanical means such as sweeping. Objectionable material shall be removed from cracks or holes.

3.2 Sealing: Objectionable cracks shall be excavated to that size necessary for filling with latex-asphalt, wax, or other approved material. The apron area shall be sealed, if necessary, with wax, latex, or other material as specified by the Engineer.

3.3 Collection Barrier or Diversion: Barriers shall consist of a wall to collect or divert water to the apron outlet. Wall material shall be concrete, rubber masonry, asphalt, fiberglass or other material as specified by the Engineer. Diversions shall consist of excavation into rock or soil and sealed, if necessary, with one of the above materials.

3.4 Supporting Framework: Wooden framework supporting the metal above ground can be used in lieu of gravel sub-base if approved by the engineer or as shown on the drawings. Materials and installation shall be as specified on the drawings. Catchments supported on framework shall be protected from wind damage.

3.5 Fencing: The fence shall be located as shown on the drawings or as staked in the field. It shall be woven wire with two strands of barbed wire (top wire 46" above ground for a 4-foot fence).

All wooden line posts shall be 3-½ -inch (minimum) top diameter and corner and brace posts 5 inches (minimum) top diameter. Wood bracing required at all corners shall be 4-inch (minimum) diameter or 3-inch by 4-inch sawed.

Wooden posts (except juniper, honeylocust, white oak, osage orange, redwood, pitch pine or red cedar) shall be treated with creosote or pentachlorophenol (a minimum of 36 inches on the butt end). Steel post (1.33 lbs/ft. exclusive of anchor plate) may be used. Post spacing for a 4-foot fence shall be 20 feet (maximum) for line posts and 8 feet (maximum) for brace posts. Depth of post setting for a 4-foot fence shall be 24 inches for line posts and 30 inches for brace posts.

Barbed wire shall have two strands of 12-1/2 -gauge line wires with 14-gauge barbs spaced at approximately 4 inches. Woven wire shall be 32 inches high consisting of 8 horizontal wires, 6-inch (maximum) spacing, and 14-1/2 -gauge wires except top and bottom wire shall be 11-gauge. Barbed and woven wire shall conform to requirements of Federal Specification RR-F-221. All wire shall be zinc or aluminum coated. Staples shall be 9-gauge and 1-1/2 inches in length.

Smooth bracing wire shall be new, zinc or aluminum coated, and not less than 14-gauge.

Wire gates shall have the same type, size and spacing of wire as the fencing. Gate end wooden stays shall be three inches in diameter with intermediate wooden stays of two inches in diameter. One gate end stay shall be fastened to the fence post with 3 wires (9-gauge). The other gate end stay shall have top and bottom wire loops (9-gauge) for fastening to fence post.

4. CONSTRUCTION OPERATIONS

Construction operations shall be performed in such a manner that erosion and air and water pollution are minimized and held within legal limits. The owner, operator, Contractor or other persons will conduct all work and operations in accordance with proper safety codes for the type of construction being performed with due regards to the safety of all persons and property. The completed job shall be workmanlike and present a good appearance. The job site shall have a neat appearance when finished.

5. MEASUREMENT AND BASIS OF ACCEPTANCE

The completed Practice shall be measured to the nearest one yard for payment purposes and converted to the nearest one one-hundredth of an acre (0.01 acre) for "As-Built" records. The acceptability of the practice shall be determined by inspections to check compliance with all the provisions of these specifications with respect to the design of the paraffin wax surfacing, physical appearance of the materials, markings, the appurtenances used and the minimum installation requirements.

The installing contractor shall certify that installation complies with requirements of these specifications. A written guarantee shall be furnished that protects the owner against defective workmanship and materials for not less than 1 year and that identifies the manufacturer and markings of the paraffin wax used.

6. ITEMS OF WORK AND CONSTRUCTION DETAILS FOR THIS PROJECT