

CONSTRUCTION SPECIFICATIONS

NATURAL RESOURCES CONSERVATION SERVICE

WATERING FACILITY

SCOPE

This item shall consist of the installation of a trough, tank, or waterer along with associated appurtenances, to provide drinking water for livestock or wildlife. Construction shall be carried out in such a manner that erosion, water, air, and noise pollution will be minimized and held within legal limits as established by state regulations.

LOCATION

The tank, trough, or waterer shall be installed at the location shown on the drawings, or at the location designated by the NRCS technicians.

MATERIALS

The tank, trough, or waterer shall be equal in size and quality to that specified or shown on the drawings. A concrete trough or tank shall be constructed in accordance with the drawings and these construction specifications. Concrete shall be designed to have a minimum compressive strength of 3000 psi at 28 days. All pipes and fittings shall be of the size and material shown on the drawings. Pumps, solar panels, electrical controllers and associated devices shall be as shown on the drawings or as specified.

INSTALLATION

The foundation area shall be cleared of all material not suitable for subgrade and shall be leveled and compacted to allow the trough, tank, or concrete pad to be placed on firm ground. The surrounding area shall be smoothed and graded to permit free drainage of surface water away from the trough or tank. All backfill for underground pipes shall be compacted to a density roughly equivalent to the surrounding undisturbed soil. Valves and plumbing shall be protected from freezing and damage by animals. Solar panels, electrical controllers, and similar devices shall be fenced to prevent damage from livestock.

HEAVY USE AREA

The trough or tank shall be located so that a dry surface is maintained around the base, extending 10 feet from all sides of the trough or tank. This area can be graveled, concreted, or paved. The minimum gravel mat thickness shall be 6 in. and concrete thickness shall be 4 inches. Concrete shall have a roughened finish. Concrete pads having a dimension greater than 10 feet shall have formed or sawn contraction joints. The joint depth shall be $\frac{3}{4}$ -inch deep for 4-inch thick slabs and 1-inch deep for slabs greater than 4 inches thick. Joint spacing shall not exceed 10 feet in any direction. Gravel shall be clean crushed aggregate of the gradation shown on the drawings.

The construction shall be performed in a workmanlike manner and the job site shall have a neat appearance when finished.