

Heavy Use Area Protection

Alabama Job Sheet No. AL561



Definition

The protective treatment of areas that are frequently used by cattle or farm equipment with suitable surfacing materials.

General Information

Heavy use area protection can be used for:

- stream crossings for cattle or farm equipment,
- around cattle watering troughs or tanks,
- around locations such as hay rings, feeding troughs, or mineral boxes,
- pond or stream watering ramps for cattle,
- cattle feedlots or walkways,
- loafing areas for dairy cows, or
- farm roads.

The most proven type of heavy use area protective treatment utilizes geotextile and stone.

The geotextile fabric used for this application is a non-woven, non-heat bonded, and needle punched material. The class or grade of fabric will be determined by the technician or engineer according to the design.

Stone for most heavy use area protection should consist of crusher run or graded stone. If graded stone is used, it should be topped with at least 1-inch of crusher run to provide a smooth walking surface for cattle. Stream crossings may require small riprap size stone for stability. If cattle use the crossing, the riprap should be topped with about 4 inches of a smoother surfacing material like crusher run.

Heavy use area protection around watering troughs or tanks, hay rings, feeding troughs, or mineral boxes

should slope away from the facility and extend at least 10 feet out from the facility. A “cattle only” walkway should be at least 8 feet wide. Stream crossings can be as narrow as 6 feet or as wide as 20 feet, depending on the purpose of the crossing.

Installation

Areas to receive heavy use area protection should have all mud, manure, and other debris removed. The stone to be placed for most applications will be 6 inches thick. Stream crossings may require more thickness due to the size riprap needed for stability. Areas which require a smooth transition from the protected area to the surrounding area should be excavated. Any depressional areas should be smoothed prior to placement of the heavy use area protection so as not to pond water.

The geotextile should be placed with edges of fabric overlapping at least 12 to 18 inches. The fabric should be held in place with metal staples provided by the manufacturer. Staples are generally placed every 5 feet within the fabric surface and 3 feet along overlaps. Geotextile used for stream crossings is held in place with larger steel rebar-size pins. Stone is then placed on the geotextile fabric. Construction equipment should not operate directly on the fabric surface.

Operation and Maintenance

Feedlots and loafing areas will occasionally need to be scraped to properly dispose of manure accumulations.

Stream crossings will require maintenance after major runoff events. Surfacing stone may need to be replaced and debris removed from the crossing.

Fencing should always be utilized with stream crossings, watering ramps, loafing areas, feed lots, etc. Fencing should restrict the cattle to the heavy use area protective surface in order to protect the surrounding soil and water resources.

References

NRCS AL Conservation Practice Standard
Code - 561, Heavy Use Area Protection
Code - 578, Stream Crossing
Code - 614, Trough or Tank
AL NRCS Guide Sheets
AL-578, Stone Stream Crossing
AL-614, Watering Troughs

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Heavy Use Area Protection Worksheet

Land User: _____ County: _____ Date: _____

Farm No.: _____ Tract No. : _____ Assisted by: _____

Practice which heavy use area is being applied on: _____

Type of traffic (vehicular, animal, human): _____

Geotextile fabric needed: _____

Thickness of stone needed: Rock riprap _____ in.

Graded stone _____ in

Crusher run: _____ in.

Dimensions of heavy use area: Length _____ ft

Width: _____ ft