

**NATURAL RESOURCES CONSERVATION SERVICE
MISSOURI CONSTRUCTION SPECIFICATION**

**DIKE
(CLASS III)
CODE 356**

GENERAL

Construction operations shall be carried out in such a manner and sequence that erosion and air and water pollution will be minimized and held within legal limits. **A land disturbance permit from the Missouri Department of Natural Resources may be needed if the disturbed area is greater than one (1) acre in size.**

The completed job shall present a workmanlike appearance and shall conform to the line, grades, and elevations shown on the drawings or as staked in the field.

All operations shall be carried out in a safe and skillful manner. Safety and health regulations shall be observed and appropriate safety measures used.

The contractor is responsible for having all utilities located at the site according to Missouri state laws prior to beginning work.

FOUNDATION PREPARATION

The foundation area shall be cleared of trees, logs, stumps, roots, brush, boulders, sod, and rubbish. If required on the drawings, a minimum of 3 inches of topsoil and sod shall be stripped from foundation area. The topsoil and sod are to be stockpiled.

Existing stream channels crossing the foundation area shall be sloped 2:1 or flatter and deepened and widened as necessary to remove unconsolidated sediments, stumps, roots, and other objectionable material and to accommodate compaction equipment.

After stripping, the foundation area will be prepared to assure bonding with the fill by removing loose dry material, scarifying, diking, adjusting moisture, and compacting as necessary.

CUTOFF TRENCH

If a cutoff trench is required, it will be as shown on the drawings. The minimum depth shown on the drawing is an estimate. Final depth of cutoff trench shall be determined by observation. Side slopes of cutoff trench shall be 1 1/2:1 or flatter, as needed to be stable. Sand, gravel, and other water conducting materials shall be removed to prevent leakage under the dike.

FILL PLACEMENT

The material placed in the fill shall be free of detrimental amounts of sod, roots, frozen soil, stones over 6 inches in diameter (except for rock fills), and other objectionable material. To the extent they are suitable, excavated materials are to be used as fill material. The distribution and gradation of materials shall be such that there will be no lenses, pockets, streaks, or layers of material differing substantially in texture or gradation from the surrounding material. Where it is necessary to use material of varying texture and gradation, the more plastic material shall be placed in the center and upstream portions of the fill. Foundation areas and cutoff trenches shall be kept free of standing water when fill is being placed on them.

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The placing and spreading of the fill shall be started at the lowest point of the foundation and the fill shall be brought up in approximately horizontal layers not to exceed 9 inches in thickness. Each layer shall be spread, processed, and shall be compacted by one of the following methods, as specified on the drawings:

- Dozer - Complete coverage by tread or track of hauling or spreading equipment. Each lift shall not exceed 5 inches in thickness.
- Roller - two passes of standard tamping type roller over the entire area to be compacted. Complete coverage by the treads of loaded hauling equipment is considered equivalent to two (2) passes of tamping roller. Each lift shall not exceed 9 inches in thickness.

The tamping-type roller shall have tampers or feet projecting not less than six (6) inches from the surface of the drum and shall have a minimum static load on each tamper of 250 pounds per square inch of tamping area. Tamping rollers with minimum static load on each tamper of 125 pounds per square inch of tamping area may be used if the number of passes is increased to four (4) or the thickness of lifts is reduced to four (4) inches. (Sheepsfoot or wedgefoot drum rollers are considered tamping rollers.)

An opening(s) in the fill for drainage during construction is permitted. Care must be taken when the fill closure is made to assure proper compaction and bond of the fill material to the existing fill. The opening shall have a bottom width wide enough to allow equipment to work on a horizontal plane. As the drainage opening is filled, the side slopes of the existing fill shall be excavated until solid material is uncovered and good bond can be attained.

MOISTURE CONTROL

The minimum moisture content of the fill material and foundation shall be such that, when kneaded in the hand, the fill material will form a ball which does not readily separate. The maximum moisture content is when conditions are too wet for efficient use of the hauling and compaction equipment.

BORROW AREAS

Borrow areas shall be taken from areas shown or described on the drawings. Unless otherwise shown on the drawings, all borrow areas shall be graded and left so they are well drained, protected from erosion, and may be seeded. Borrow area cut slopes shall have side slopes of 3:1 or flatter unless otherwise shown on the drawings.

PLACEMENT OF TOPSOIL

When required by the drawings, the stockpiled topsoil shall be placed on the finished surface of the areas indicated on the drawings. The final depth of topsoil shall be as shown of the drawings.

VEGETATION

Refer to JS-AGRON-25 for seeding and mulching recommendations or equivalent.

Additional Details: _____

**NATURAL RESOURCES CONSERVATION SERVICE
MISSOURI OPERATION AND MAINTENANCE**

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OPERATION AND MAINTENANCE

- Inspect dike for evidence of sloughing, seepage or erosion following high water stage events.
- Remove any debris deposited on the slopes and top of dike during high stage events.
- The height and shape of the dike must be maintained to the required design dimensions.
- Vegetation shall be established and maintained on the surface of the dike to control erosion.
- Woody vegetation shall be removed from the slopes and top of the dike.
- Inspect and maintain any pipes or structures installed in the dike embankment.

Additional Details: _____

