

**NATURAL RESOURCES CONSERVATION SERVICE
DOCUMENTATION REQUIREMENTS**

SURFACE DRAINAGE, FIELD DITCH

CODE 607

DESIGN SURVEY

Sufficient profiles will be run to determine the number and location of drainage field ditches needed. Ordinarily the design survey for mains and laterals will give this information.

CONSTRUCTION LAYOUT

Set enough stakes to guide the construction equipment operator in constructing the drainage field ditches.

The amount of staking done shall be that required by the contractor or cooperator to excavate to grades, dimensions and specifications. This usually consists of setting centerline stakes for alignment. Cuts are normally marked on stakes only when a variable cut is required.

CONSTRUCTION CHECK

Length

The length may be determined by chaining, pacing, or scaling on the aerial photograph.

When the lengths of ditches are determined by pacing, chain a representative ditch from the group of ditches and compare the paced length with the chained length. If the distances differ, adjust the paced length to the actual (chained) length, and apply the percentage adjustment to all other paced lengths. Make a record of these computations. Indicate by sketch on field survey notes which ditch was used as the representative one.

When lengths of ditches are determined by scaling, it is not necessary to check aerial photographs for true scale.

Profiles and Cross Sections

For each group of ditches constructed at the same time in a field, select a ditch that is representative of all the ditches, and for that ditch:

- Take ditch bottom and normal ground profile shots every 100 feet, plus one shot at each end of the ditch. Additional shots shall be taken if the ditch appearance indicates a need.
- As a minimum, take cross sections of the completed ditch once every 1000 feet; at least one cross section; and at other locations if the ditch cross section indicates a need.
 - The cross section shall extend across the shaped spoil bank.
 - The checker shall visually determine that ditch side slopes are uniform. If in doubt, take rod readings on the slope between ditch bottom and top. Take shots at all breaks in slope.
- Record all data taken in survey notes.
 - Check all ditches for grade to ensure proper drainage. Occasional undercutting that will create ponding of not more than 0.1 foot is acceptable. Field survey notes for grade checks may be discarded after the check for grade is made.
 - The check shall visually determine that all ditches meet specifications.

Culverts, Pipe Drops, and Bridges

Take shots on the inverts of the upstream and downstream ends of all culverts and structures, and indicate dimensions on survey notes.

Check all bridges to determine openings are adequate in cross section and depth, and bridges do not impede flow. Record data obtained on survey notes.

RECORDING DATA

Field notes shall be recorded in loose leaf or bound field notebooks as prescribed in the Engineering Field Manual for Conservation Practices.

Record practice name, agreement number, FSA number if applicable, and draw sketch of field and location surveys on bound or loose leaf field notebook paper.

Check the notes carefully to determine that all specifications have been met. Date and sign statement, "This practice meets specifications."

RECORDING COMPLETED PRACTICES

Show ditches constructed and reported in red on field office copy of conservation plan map, or, if not available on aerial photograph or overlay.

FILING NOTES AND RECORDS

See General Manual 120, Administrative Services; Part 408, Records; Subpart D, Exhibits; 210, Engineering; 210-11, Conservation Practices.