NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE ENGINEERING NOTEKEEPING

SURFACE DRAIN – MAIN OR LATERAL

CODE 362

NOTEKEEPING

Design Survey, Designs and Plans

A) A plan-profile drawing will be prepared for all Class II and larger jobs and all jobs involving underground public utilities. Drawings will be prepared on standard sheets or state approved forms. When plan profiles are not required, information to support design will be recorded in the engineering field book or case file as appropriate. The following will be included either on the drawings or in the engineering field book as appropriate:

1) Location map
2) Profile of main
3) Design grades
4) Typical cross section showing bottom width, depth, side slopes, berm width and method of spoil disposal
5) Drainage area
6) Group jobs require a drainage area map showing the location of ditches, apparent property lines and ownership along the works of improvement
7) Structures where applicable
8) Soil borings where applicable
9) Yardage calculations where needed for performance certification
10) Outlet conditions
11) Cross reference to appropriate engineering field books will be made on drawings and plans
12) Recommendation for channel vegetation

Construction Check

A) A sampling process can be used in obtaining supporting data for jobs consisting of a number of similar ditches. The sample should be taken from segments or parts that appear least likely to meet specifications. In such cases, the person doing the checking is to satisfy himself that the entire job meets specifications and record adequate supporting data for the selected sample.

Supporting data and signed certification statements may be accepted from qualified contractors. The statements must include appropriate information and measurements to show that standards and specifications have been met. These backup data need not necessarily follow the format used by NRCS, but must be legible and understandable. Each year an NRCS construction check shall be made, recorded, and filed in 5% of the jobs installed by each contractor making his own certification.

B) The following information shall be recorded as supporting data when the job is completed:

1) At least one ditch cross section and others as necessary are to be taken to show that side slopes, depth, bottom width, spoil disposal, and berm widths meet specifications

2) Show grade of completed ditch. The horizontal interval between profile shots will depend upon the uniformity of the topography and the quality of construction. Generally, readings should be taken at least once every 400 feet. Where layout hubs are still n place, the check may be made from them.

3) Length of all ditches installed

4) Data on all structures installed

5) Adequacy of outlet

6) Certification that practice meets standards and specifications. Note any exceptions.

7) Date and signature of person making construction check

C) When construction checks are made of a system of parallel shaped bucket ditches, check out notes need to be recorded for only one representative ditch. A minimum of one cross section will be taken. Grade checks shall be made as necessary by the individual approving the design. <u>Visual inspection may be used as construction checks for all remaining ditches in the system unless the responsible employee determines that more construction checks are needed. Documentation of this visual check will be made as part of the construction check.</u>

<u>Recording Data</u>

A) Field survey and construction check data will be recorded in a standard engineering field book or on other approved forms in accordance with Technical Release No. 62 and Chapter 1 of the Engineering Field Handbook.