

6-7 SLOPE STAKING

In slope staking notes the several trials to determine the catch point need not be recorded. Only data concerning the final stake need appear in the notes.

Figure 72 shows slope stake notes in the descriptive form. In this example the left-hand page is arranged like level notes, with the added column for the finished grade of the center line. The right-hand page is arranged to record on the center of the page the rod reading, the elevation of the center line stake, and the cut or fill at the center line.

The width of the road bed is noted at the top of the page, for example, left 25'.

After the catch point is determined and the slope stake set, the rod reading, elevation, cut or fill, and distance from center line are entered in the notes. When a reference stake is set, the rod reading, elevation, cut or fill, and offset also are entered in the notes. The slope is noted at the extreme left and right sides of the page.

The title page should contain appropriate notations regarding the type of stakes set and the type and marking of guard stakes, since these are usually constant for the project.

Figure 73 illustrates slope stake notes in the graphic form. This form is usually used for more complicated sections and requires preparing a sketch to show the proposed section and the existing ground line. Shown also are the control elevations, distances, and slopes for the proposed section.

The instrument H.I.'s are plotted on the sketch for clarity, and the cut or fill, distance out, and slope are noted for each point set.

This example assumes that the contractor requested that stakes be set at the wall face produced and the 1:1 slope produced to aid in staging the grading.

Note that the level circuit is shown taking off and closing on separate bench marks. If there is not enough space, this information should be placed on a separate page and cross-referenced.

Observe that the design stationing reads from the bottom of the page and the measured station and rods read from the top of the page. This was done to avoid confusing the two. In addition note the check distance to the tract line showing that the top of the cut is within tract limits.

Figure 74 illustrates a method of marking guard stakes for slope staking.

The back of the guard stake should always be marked with the station number of the section, should indicate left or right, and should be lettered

to read from the top of the stake down. The front of the stake should indicate whether it refers to a slope stake or a reference point. The slope stake shows the cut or fill, distance out, and the slope. The reference point shows the cut or fill and offset to the slope stake, then repeats the same information shown on the slope stake.

It is sometimes convenient to mark the front of the stake to read from the top down instead of across the stake.

When the design section is complicated grade sheets should be supplied, with sketches clarifying the relations of the stakes set to the design section.

Your field notes should always show the data marked on the guard stakes.

6-8 TOPOGRAPHY

Field notes for topographic surveys are arranged to provide space for both the field-measured values and the reductions.

Figure 75 shows a note arrangement for transit stadia notes for topography. The left-hand page column headings are arranged to record the stadia interval, horizontal angle, vertical angle, and rod reading. The horizontal distance, when computed, is entered on the right-hand side of the first column, and the difference in elevation and computed elevation is entered in the last two columns.

The description of the point read is entered on the left side of the right page, and the remainder of the page is used for a clarifying sketch.

Each setup is preceded by a notation of the point occupied, the direction the angles were turned, and the H.I. elevation for the setup.

The horizontal zero initial is recorded as the first reading of the set to establish the orientation.

Note the use of coding to show which building corners were read (three were taken to allow a check on the plotting).

Transit stadia notes involving any location always require a clarifying sketch.

In this example the reduction is left for the office to do.

Figure 76 shows notes for plane table topography. The columns are arranged to allow the readings and calculated values to be entered from left to right in the order in which they occurred, to achieve fast recording and reduction.

Speed in plane table topography is obtained through the teamwork of the observer and the recorder. The sequence of the observations, record-