

On location chainmen will be supplied with plumb bobs, which is to be used on all location chaining to the end that all measurements will be correct, all measurements to be taken after the station stake is given. This is not necessary on preliminary lines.

Determine approximately all drainage areas, discharge to minor openings and plot their boundaries upon the 400-ft. contour map. Whenever a definite and reliable high water mark can be obtained, take a cross section of the stream, giving the area of discharge, wet perimeter and approximate fall of stream.

On cross section paper plot all ravine sections in accordance with the sample of ravine section sheet attached, giving all the data called for therein.

Locating Engineers will organize a sounding party properly equipped with drills and sounding apparatus, in charge of a man accustomed to construction work and classification. This party will sound all cuts and determine the classification in excavation, the result of which soundings is to be plotted on profile. Sound all bridge openings to determine for construction purposes length of piles and depth of masonry, foundation, etc., and plot the result on the ravine section. At all important openings, requiring deep masonry foundations, arrange, when necessary, for a well equipped drilling party to make the necessary soundings, when the work is beyond the ordinary equipment carried by the regular sounding party.

When the location starts from the main line of this or of some other railroad, locate the point of frog 2 feet back of the last convenient rail joint and 84 feet back of that established zero on the center line of the road. With this zero established in this way run in 84 feet with a 7' 30" curve, and from thence such a curve as your proposed located line calls for.

Avoid curves over bridges whenever possible and particularly avoid P.C. or P.T. coming within 300 feet of any bridge.

At least 300 feet of tangent must be procured between reverse curves, and two curves in the same direction within 1000 feet of each other are to be avoided if possible.

It is preferred that curves be always of an even degree index, and with a little care it is seldom necessary to have them otherwise.

The maximum curvature desired by this office is 4 degrees and the minimum 1-degree, and no curve must be less than 400 feet in length.