

These posts may be round or split, and shall have a cross-section not less in dimensions than that of the rails, and they shall be of cedar or Douglas fir; they will be held in place at the top by a heavy rail or rider laid in the angle above the posts. The fence, when completed, shall be not less than 5 feet high above the general level of the ground, as per drawing No. 11. Over ground subject to overflow a strong post and barb wire fence will be substituted and placed where the Engineer may direct.

GRADING.

9. Under this term is included all excavations and embankments and surface forming, whatever may be the materials, and whether the same be required for the line of railway, or for the diversion or forming of water-courses, roads, approaches to bridges or level crossings, draining and off-take ditches, station grounds and all other works, contingent upon, or relating to excavations and embankments, as required by the nature of the contract or described in this specification.

Time of commencement and Damage to Crops.

10. In woodland the grading will be commenced after the clearing, close cutting and grubbing required is completed to the satisfaction of the Engineer, and in cultivated sections, the Contractor will be held responsible for damages to crops.

Profile.

11. The red line on the profile exhibited, according to drawings Nos. 3 and 4, indicates the formation level, that is, the surface of the tops of embankments and the bottoms of cuttings previous to the laying and ballasting of the permanent way. The black undulating line represents the present surface of the ground, and the blue line the level of the top of rail which is 16 inches above formation level.

Cuttings.

12. The cuttings shall be formed to the cross-section exhibited according to drawings Nos. 6 and 7. The width at formation level will be 22 feet, and the inclination of the slopes in earth will be one and a half horizontal to one perpendicular. In rock cuttings the slopes will be, as a rule, one horizontal to four perpendicular. In cuttings partly earth and partly rock, a berm of six feet shall be left on the surface of the rock. But these proportions may be varied by the Engineer to suit the nature of the materials to be excavated and ensure the stability of the slopes.

Ditches in Cuttings.

13. The whole of the grading shall be carefully formed to the levels given, and the roadway in cuttings shall invariably be rounded, and left at not less than six inches lower at the sides than in the centre. There shall be a side ditch at the foot of each slope throughout the whole length of the cuttings, the bottom of which shall be kept 12 inches below the roadway on the centre line, and lower if necessary, with a fall towards the ends of the cuttings so as thoroughly to drain the same. The cuttings shall be widened a little at the ends, and these ditches carried into the ditches at the sides of the embankments, so as not to injure the latter.

Drains in Cuttings.

14. In very wet cuttings, arising from springs or soakage, drains shall be formed at the foot of the slopes averaging about four feet deep, formed with a bed of three poles, two to three inches in diameter, laid breaking joint in the bottom of the trench and then filled up with coarse gravel or broken stone not larger than ordinary road metal. In level cuttings the trenches must be dug to a greater depth than four feet at the ends, so as to give sufficient flow for the water.

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