

Structural Analysis Method of Cut and Cover Tunnels under Special Design Conditions

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In this paper, three structural analysis methods of such cut and cover tunnels under singular design conditions as a large scale tunnel, a tunnel in the banking and a U type-shaped tunnel are proposed. First, in order to improve the design method of large scale cut and cover tunnels, we propose a new method of calculating the subgrade reaction varying depending on the displacement level. Second, an economical design method of cut and cover tunnels to be constructed in the embankment is proposed based on a structural analysis of response displacement. Finally, the seismic design of a U-shaped structure based on earthquake earth pressure and that based on response displacement are made, and as a result, the differences between the two design methods are shown.