

Analysis of multi girder short span highway bridges

Ghassan Nashat Kamal

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Abstract

A static analysis based on classical series solution of rectangular slab is proposed to analyse short span multigirder highway bridges. The bridge deck is idealized as a rectangular slab simply supported along the two opposite edges and being continuous over flexible supporting longitudinal girders. The effect of one cross beam or two symmetrically placed cross beams are also taken into account. The proposed stiffness method is computerized to readily analyse a particular bridge deck. Several bridge decks are analysed and the results are compared with available solutions from existing methods and those found from the code values.