

عنوان مقاله:

Finite Element Analysis of Tie Beams under the Effect of Differential Settlement of Isolated Footings

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خلاصه مقاله:

The main objective of this paper is numerical analysis of the tie beams of isolated footings under the effect of differential settlement. 3-D simulation of the tie beams connected to isolated footings system by the finite element method was conducted. The numerical results were compared with the results of mathematical simulation of the tie beams given by previous research to determine the coefficient of semi rigid connection. The numerical result illustrate that the bending moments carried by the tie beam increase as the isolated footing width increased. Charts presented in the current paper show the effect of each parameter in the straining actions of tie beams that can be simply used by design engineers.

کلمات کلیدی:

Tie Beam; Differential Settlement; Isolated Footings; Soil Reaction; Finite Element

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