عنوان مقاله:

Determination of The Critical Embedded Depth of Cantilever Bored Pile Wall Using Numerical Analysis

محل انتشار:

دهمین کنگره بین المللی مهندسی عمران (سال: 1394)

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خلاصه مقاله:

In this article, the behavior of one widely used excavation supporting system called Contiguous Bored Pile (CBP) Retaining wall is studied using Finite Element software of PLAXSIS. The embedded depth of wall is a fundamental design parameter attainable in the design phase and it is known that the wall displacement decreases with increasing pile embedded depth. However, what is remained unknown and is meant to be revealed in this study is that to what extent increasing wall embedded depth can be effective. Critical embedded depth of pile is the minimum embedding depth at which the maximum efficiency of pile arises. Based on observations, the critical embedded depth of pile in granular soil and cohesive soil are 1.1 and 2.3 times of the wall height, respectively. Furthermore, the effect of soil type and its strength on the wall behavior and also the effect of changing the embedded depth on the wall bending moment was investigated.

کلمات کلیدی:

Contiguous Bored Pile Wall, Numerical Modeling, Critical Embedded Depth, Total and Horizontal Displacement

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