ANCHORED PILE RETAINING WALL DESIGN OF A HOTEL PROJECT

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Introduction and Statement of the Project
The project is of a 5-star hotel in Kyrenia – Cyprus, the aim is to find the shoring for a 25m deep excavation. Throughout the process of finding the possible design solutions a number of studies have been made in order to find the necessary parameters. One of these studies is the desk study which is completed by evaluating site location, topography, site geology, hydrology, flood risk, site history and ecology. With the accordance of desk study, the literature research is done to find possible design solution according to technicality and availability. To find design solution, the site investigation tests and soil profile is also considered. In this project, after all of these studies, the design solution is found both hand calculation and software analysis (GEOS).

SITE INVESTIGATION & DESK STUDY

when looking at the calculations, pre anchored ixa (support system design) is taken as sample. According, to project soil type, Type D anchor is selected, and six anchors is required for 29 m depth and for every anchor the free length, root length and diameter are defined. Also, the P values were calculated. Then, these lengths and diameter were inputted to the software.

Once the pile geometry has been entered into the program the analysis can be computed. In figure above the analysis the software ran can be found and following parts are completed.

Analysis

Design

After the piles are designed using the pile diameter and the spacing between the pile centers, a plan of the piles around the site is made.

Reference

[1] İNM 424122 İstinat Yapıları Tasarımı