

Ministry of Higher education and scientific Research

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Building and Construction Engineering Department

Highway and Bridge Engineering Division



## **Analysis of sheet pile by Plaxis software**

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## **Abstract**

In this research, sheet piles had been studied and analyzed by using a computer program named Plaxis.

Many variables had been used such as depth of cut, water table level, amount of surcharge, no. of anchors, and length of anchor etc. and plotted in charts which shows these effect on the sheet pile deformation

The results show:-

- 1- As the load increasing (5kN, 10kN, 20kN) the deformation in sheet pile increased.
- 2- As the depth of cut increasing (15m, 20m, 25m) the deformation in sheet pile increased.
- 3- As the water table level increasing (2m, 5m, 10m, and 15m below the ground level) the deformation in sheet pile decreased.
- 4- As the no. of anchors increasing the deformation in sheet pile decreased.
- 5- The length of anchors affect slightly on the deformation of sheet pile.
- 6- The type of soil affect largely on the deformation of sheet pile.
- 7- The deformation of the sheet pile decrease with the increase of the value of EI (flexural rigidity).