

Foundation Settlement Determination: A Simplified Approach

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Abstract

The heterogeneous nature of the subsurface requires the use of factual information to deal with rather than empirical or generalized equations. Therefore, there is need to determine the actual rate of possible settlement in the soil before structures are built on it. This information will help to determining the type of foundation design and the kind of reinforcement that will be necessary in constructions. This paper presents a simplified and a faster approach to determining foundation settlement in the soil using real field data acquired from seismic refraction techniques and cone penetration tests. This approach was also able to determine the depth of settlement of each strata of soil. The rate of settlement for the four profiles was found to vary between 0.019 m and 0.035 m. The results obtained revealed the different depth of possible settlement.