Students' Placement Office, IIT Kanpur

Project Verification Form

Title of the Project	"COMPARATIVE STUDY OF DIFFERENT TYPES OF FOUNDATION USING STAAD Pro"
Commencement Date	March 2021
Completion Date	August 2021
Project Supervisors	Assistant Prof. Arstu Gautam & Mr. Ajeet Pal
Organization/Institution where the Project was accomplished	Rajkiya Engineering College, KANNAUJ

Project Description (You can use extra A4 sheets in case you run out of space however the extra sheets should also have the seal & signature of the Project Supervisor or the relevant authority)

In our study we have tried to determine which type of Foundation should be preferred if the loading conditions and bearing capacity of soil is same by using finite element analysis method using STAAD Pro. (STAAD Foundation).

This work will study the effects of soil-Foundation-structure interaction on the end bearing, bending moment and deflection response. Three types of Foundation with frequency-based design were analysed, including Isolated Foundation, Combined Foundation, and mat Foundation. The finite element method using the STAAD Pro. program was first validated using experimental data. Recommendations were given to simplify the soil-Foundation structure interaction analysis of loading, deflection, and moment. In this research work, we are comparing different shaped Footing for same loading condition also soil bearing capacity to determine the best suitable and stable type of Footing which can transfer load, bear deflection and moment. In this study is can be concluded that Combined Footing is comparatively more suitable and best in comparison with Isolated or mat Footing. The parameters used for analysis are selected such that they resemble the actual conditions. From the analysis, the method which gives the minimum ultimate bearing capacity for shallow Foundation on top of the slope may be recommended for further design. The collected data is collected, and a 3-D model is generated using STAAD Pro. and STAAD Foundation. The various loads acting on the structure is calculated, and the structure is analysed for the various load combinations. Design of the building and various Foundation is done. The obtained results of various Foundation are analysed and compare with each other to Know which Foundation is Better in given condition.

By appending your signatures to this form you acknowledge and agree that:

- This form along with the certificate would serve as the official document between the project supervisor and Students Placement Office, IIT Kanpur regarding verification of the student's project work
- The student will provide additional information and documentation relevant to his/her project upon request by the Students' Placement Office
- The student has clearly defined his/her individual role in projects done in cooperation with other students, faculty, groups or company personnel.
- Incorrectly over-stating the reach, impact and/or quantitative/qualitative results of a project is unethical.
- In case of violation of any of the above rules, Students' Placement Office, IIT Kanpur reserves the right to take necessary action including de-registering the student from the placement season and reporting the misconduct to the Institute Authorities.

Submitted by:-	**Project Supervisor Details:-**
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