

Assignment 5: PLAXIS FEA of circular footing

Assigned: 4th March 2019

Due: 15th March 2019

You may obtain access to Plaxis through a Virtual Desktop. Information about gaining access can be found at <http://caee.utexas.edu/students/itss/43-students/it/386-virtualdesktops>.

1. Familiarize yourself with the documentation of the program PLAXIS, with particular emphasis on the PLAXIS “2D 2019 – Tutorial Manual” and PLAXIS “2D 2019 – Material Models Manual”. These can be found at <https://www.plaxis.com/support/manuals/plaxis-2d-manuals/>. Please read and complete the following the Tutorial on the settlement of a Circular Footing on Sand (Sections 1.1-1.3).

“Play” with the program to ensure that you can set up, solve, and interpret a problem through the pre- and post-processor of PLAXIS.

Write a short report including the following:

- (a) Described the elements used, average mesh size, soil properties and the solver.
- (b) Final deformed meshes for the rigid and flexible footings and the load versus displacement plot for the center of the flexible footing.
- (c) Explain how the results were validated.