

PileLoads991112-.xlt
from
Techno Consultants Ltd
An Excel Template for finding
Load Distribution Beneath Rigid Pile-Caps or Rafts

Loading the Template on to your computer

PileLoads is supplied as an Excel 97 Template. Copy its file into Microsoft Office folder for its templates. Generally the path to this folder is:

C:\Program Files\Microsoft Office\Templates

To load and use the Template, in Excel 97 choose:
File, New and then select the file PileLoads991112-.xlt

If you receive an Excel Warning about running Macros and are prompted for whether to load them, answer YES to *Load* and *Enable* Macros. **PileLoads** incorporates VB Macros and to allow your computer to use them is vital for its operation.

Features

Pile Loads991026-.XLT is a spreadsheet template to determine load distribution in piles or packs beneath rigid rafts or pile caps. Loads induced in n-piles beneath a rigid m-sided polygon subjected to moments M_{xx} , M_{yy} and x-number of vertical loads can be calculated.

Two analyses are carried out for each wind direction. The first analysis finds the induced loads for an overturning check. The second analysis determines the induced loads for actual design of the foundation. The preset load factors for the overturning check are 1.0 for Dead and 1.4 for Wind Load. The factors for finding design loads for piles are 1.0 for Dead, Live and Wind loads. These preset factors can be changed to suit a given design criteria. To analyse for wind blowing in the opposite direction, all the user needs to do is click a radio button for this purpose.

Coordinates from an origin at a convenient point describe the position of each pile, node and load. Using the specified thickness and density of the raft or pile cap, the self-weight of the m-sided polygon is calculated by the template itself and is included in the analysis.

The spreadsheet includes three examples having 2, 3 and 4 piles. They can be amended or renamed to suit project details of the user. To add a node, load or pile, click the appropriate "Add" button at the top of the sheet. To delete a node, load or pile, position the cursor in any cell in its row (by mouse click) and then click the appropriate "Delete" button. To include additional pile caps for analysis, click "Copy/Add Sheet" button at top of the screen.

Shaded cells in the input and the corresponding output mean "User Input" and unshaded cells "Spreadsheet Results". For further details refer to "Notes" within the spreadsheet

