

CDS Pile

CDS_Pile is an optional module to complement the CDS[®] suite of Civil Design Software from Foresoft Pty Ltd.

CDS_Pile can dramatically improve the productivity and efficiency of those involved in the monitoring of Piling operations.

After consultation with a number of practitioners to determine current methods, CDS_Pile was designed and implemented in such a way as to computerize the best aspects of the manual process, and automate as much of the process as possible.

Don't put up with days of tedious calculation followed by even more days of tedious drafting any longer

Grid Calculation

Piles are usually laid out on one or more grids, and the basis of improving efficiency is to ensure that you can duplicate any grid layouts with a minimum of effort.

CDS_Pile incorporates routines to allow you to set up your underlying grids to match those on the design plan.

To allow for all possible manner of creative design, you can have 10 different 'grid sets' within a particular job.



Each of these grid sets allows you to specify a unique point of origin for each grid axis.

You can also define the bearing for each axis, and the axes do not need to be perpendicular to each other.

Each axis can have different grid spacing if required, and the grid intersections are labeled to suit your particular needs, or those of your designer.

Define Pile Structure

Commonly used pile layouts can be easily entered using the general CDS facilities, and then stored as specific 'pile structures'

These structures can have an insertion point which is not an integral part of the structure if required, allowing for 'offset structures' where needed.

Once stored, the pile structure can be used in all subsequent jobs.

Define Pile Location

To ensure maximum processing efficiency in all situations, CDS_Pile provides two methods to define the location of the piles.

Individual – where it is convenient to do so, you may insert each structure interactively by choosing the structure and then pointing to the grid intersection where you wish it to be placed.

Tabular – where the job is larger, and the same structure is used in many locations, it can be faster to enter the details into a table, and then have all of the structures applied at once.

In this method you simply define the name of the pile structure, and then list all of the grid intersection points where it is to live. These intersections are referred to by their grid label e.g. A3, B9, C11 etc.

In both instances the pile structure can be rotated and or mirrored to suit the particular application.

Define Displacement Symbol

The displacement symbol generally consists of one or more arrows that indicate

the displacement of the field pile from its design position.



You may choose from a pair of arrows indicating 'X' and 'Y' displacement, or a single arrow showing the direction of the displacement.

In either case, you can have the value of the displacement displayed along the arrows, either in millimetres or in metres.

Alternatively, the arrows can be scaled to represent the magnitude of the displacement, and the actual values can be read from the Displacement Report.

Calculate Displacement

In order to calculate the displacements, you need to specify which range of points you have used to identify the design points, and which range is used for the surveyed location of the piles as placed.

These points can either live in the same job, or in separate jobs if that is more convenient.

CDS_Pile will automatically search for and report on any surveyed point that falls within a defined radius of each design location. There is no need for special point numbering or matching.

Once the displacements have been calculated the specified symbols can be displayed on the screen for checking, and the final plan can then either be printed directly from CDS, or exported to an Autocad DWG file for further embellishment in CAD.

Piling Report .

CDS_Pile will request the allowable tolerance for the job, and then produce a report that shows the actual displacements of all surveyed points from their design location.

The report also shows the amount or amounts out of tolerance for all points that have exceeded the specified tolerance.



PILING DESIGN DISPLAY AND REPORTING ON YOUR DESKTOP



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