

COMBINED3D



Dimensional Solutions, Inc.

www.Dimsoln.com



Combined3D

Advanced Software for Foundation Design

- Are you faced with designing a spread or combined foundation with multiple load cases?
- Are the two foundation piers of your combined footing asymmetrically located in both the directions?
- Would you like to automatically generate detailed sketches for your designer?
- Do you wish you could go from design to construction drawings in one step?
- Are you searching for a quick solution to estimating foundation material quantities?

If the answer to any of the above questions is yes, you will want to consider Combined3D.

Combined3D can significantly reduce the time and effort it takes to analyze/design a foundation. Following are some of the reasons why:

1. For foundations such as those for building columns and other structures, designing a foundation requires inputting minimal foundation design parameters and loads.
2. With its analysis option, you can analyze a number of “what-if” scenarios. Combined3D’s messaging system reduces your guesswork in determining various foundation parameters. This enables you to concentrate on other important tasks.
3. It generates design sketches such as foundation plan and elevation, and pile location plan. That means you no longer have to hand draw sketches for your designer.
4. It interfaces with popular CAD engines such as Microstation, SmartSketch and AutoCAD. Therefore, you can produce construction drawings at the touch of a button.

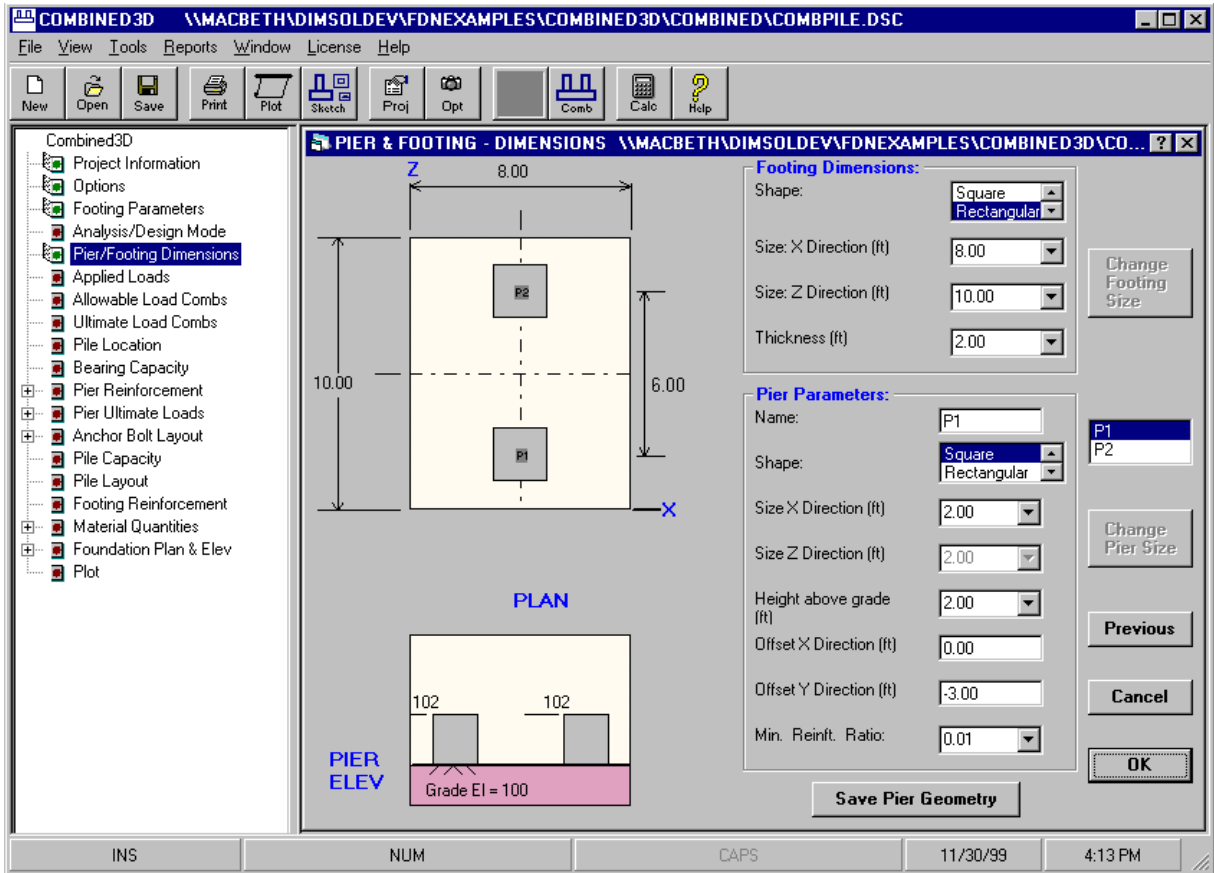
Combined3D has many other features that will simplify your complex work process from designing a foundation to producing a construction drawing in a few easy steps. It has been developed by civil engineers for civil engineers. Therefore this easy to use software requires minimal training and enhances productivity.

The following pages briefly describe the product capabilities.



Combined3D User Interface

Combined3D has a graphical user interface with a familiar windows “Explorer” type look. The left pane lists the input and results dialog items and the right pane displays the corresponding dialog. The main menu bar and the tool bar display various options and actions to choose from.



What this means is that you have a perspective of the overall project at any time. Because you constantly have the “big picture,” in the left pane you can quickly view and make the necessary decisions about its “pieces”. You can view multiple dialogs simultaneously to perform many tasks such as verify or change your input data to view the change reflected in the results.

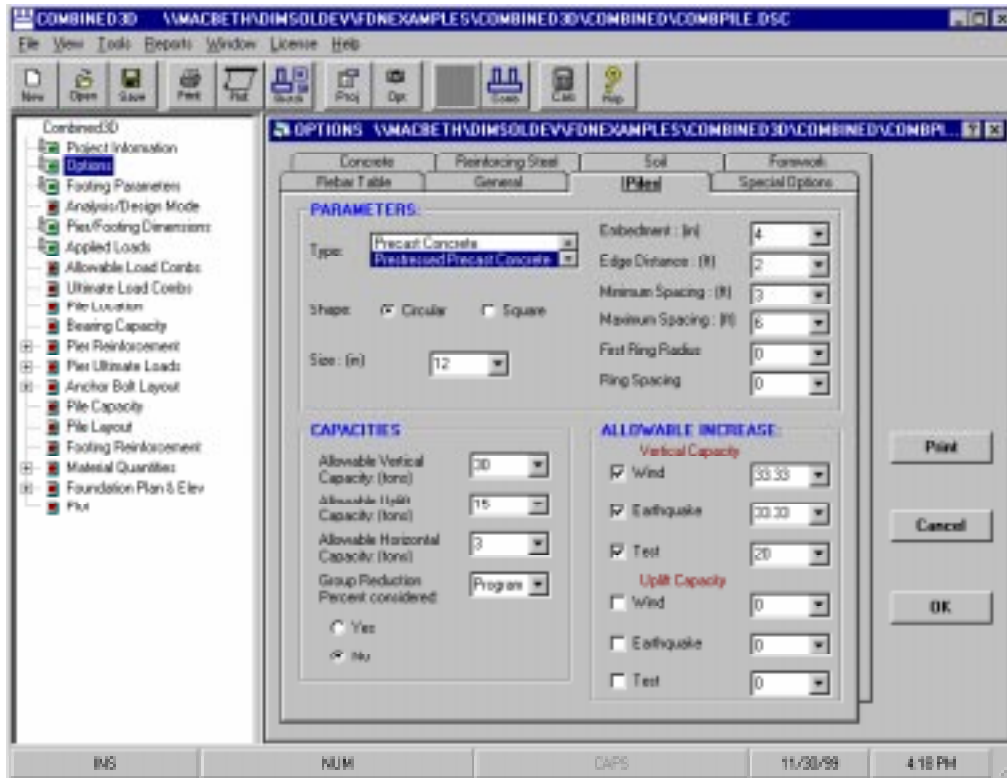
For saved foundation designs, you can view the material quantities and the foundation plan and elevation sketch without running the project. This serves as a fast and easy way to retrieve key information about a foundation.



User- Defined Options

Combined3D lets you specify many options required for foundation design such as:

- Material properties for concrete, reinforcing steel, and soil
- Design parameters such as setting minimum and maximum rebar size, allowable increase in stresses due to short term loads, and others
- Geometric parameters such as concrete cover over rebar, minimum and maximum pile spacing, pier and footing formwork dimensions, and others

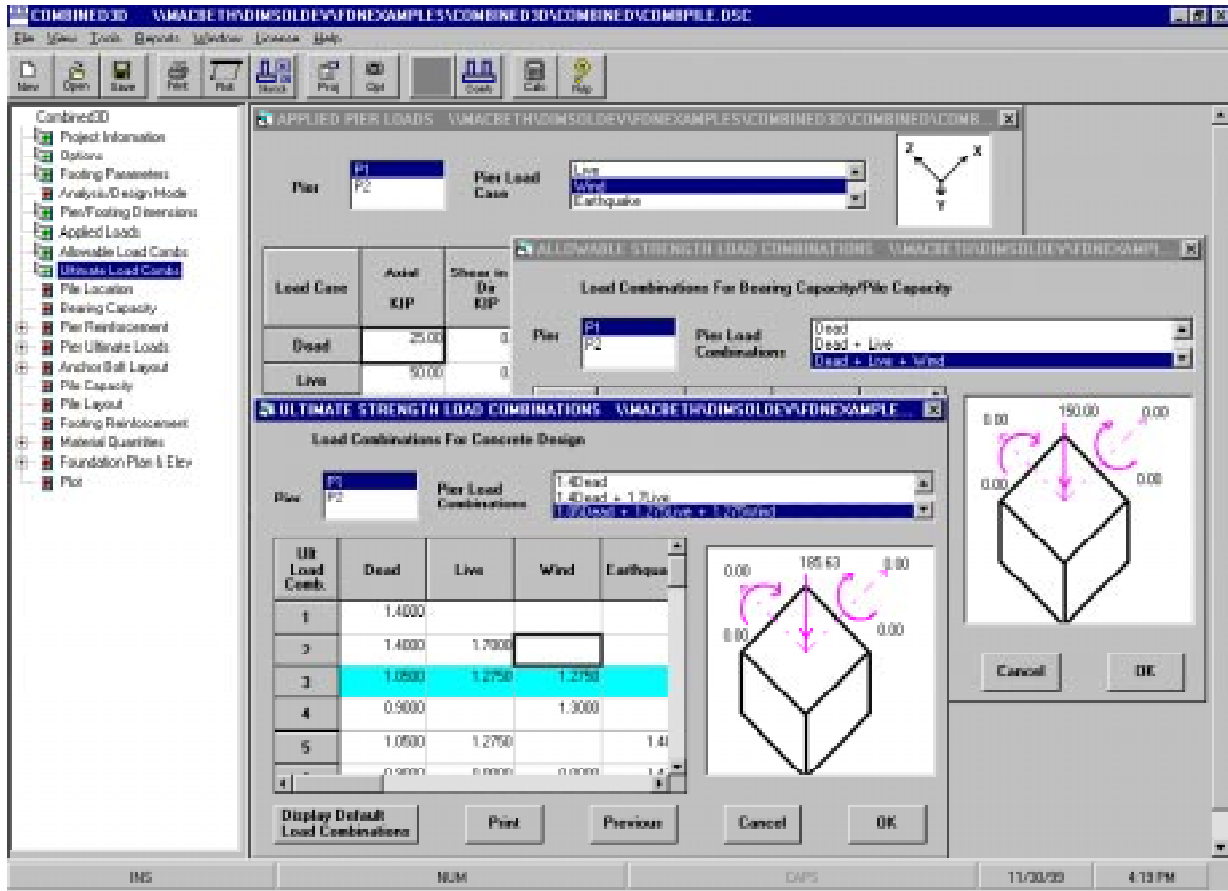


These options give you flexibility in analyzing or designing different types of foundations. They also let you customize parameters such as rebar sizes and formwork sizes to help you adhere to your company and client standards.



Load Case/Load Combinations

You can enter any load case, for e.g. Dead, Live, Wind, Earthquake, Crane load, Thermal load, Friction load, or any other and any allowable/ultimate strength load combination of the load cases in Combined3D. You can add, modify or delete load cases with a simple right mouse click. You can enter the load combination factors for allowable strength (used for determining bearing capacity of soil and pile capacities) and ultimate strength (used for reinforced concrete design) and/or you can choose the default factors built into the program based on code requirements.

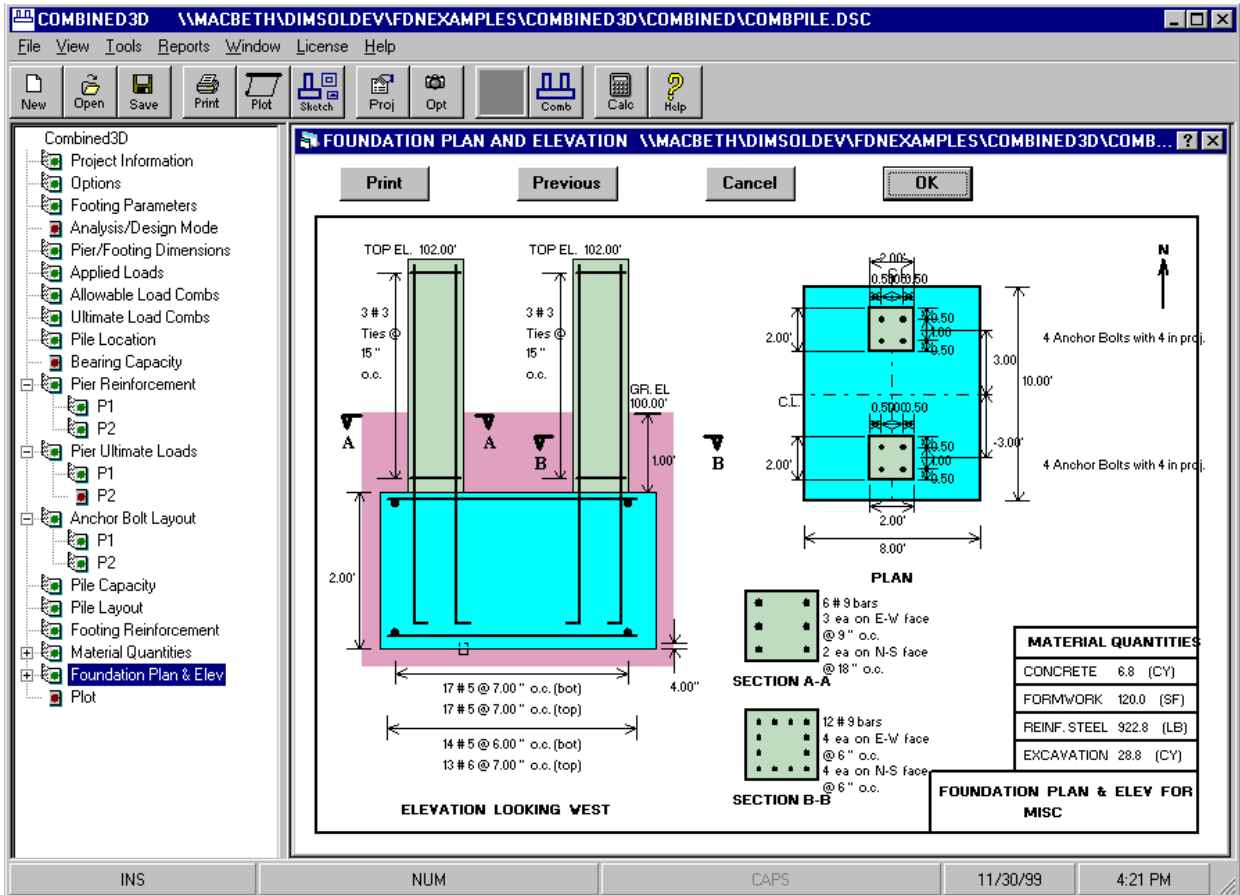


This gives you the flexibility to design foundations supporting structures in any kind of industry such as industrial equipment (exchangers and towers) support in petrochemical refineries or chemical plants, column support in concrete or steel buildings, bridge pier in bridges and others.



Foundation Plan/Elevation Sketch

Based on the completed foundation analysis/design, Combined3D generates a design sketch showing the plan, elevation, material quantities and a section through the piers showing reinforcement details. The sketch displays anchor bolt layout on the pier(s), pier and footing dimensions, pier offsets from the centerline of the footing if any, pier POS (point of support) elevation, pier longitudinal and transverse rebar information, footing rebar information, and material quantities of the foundation.

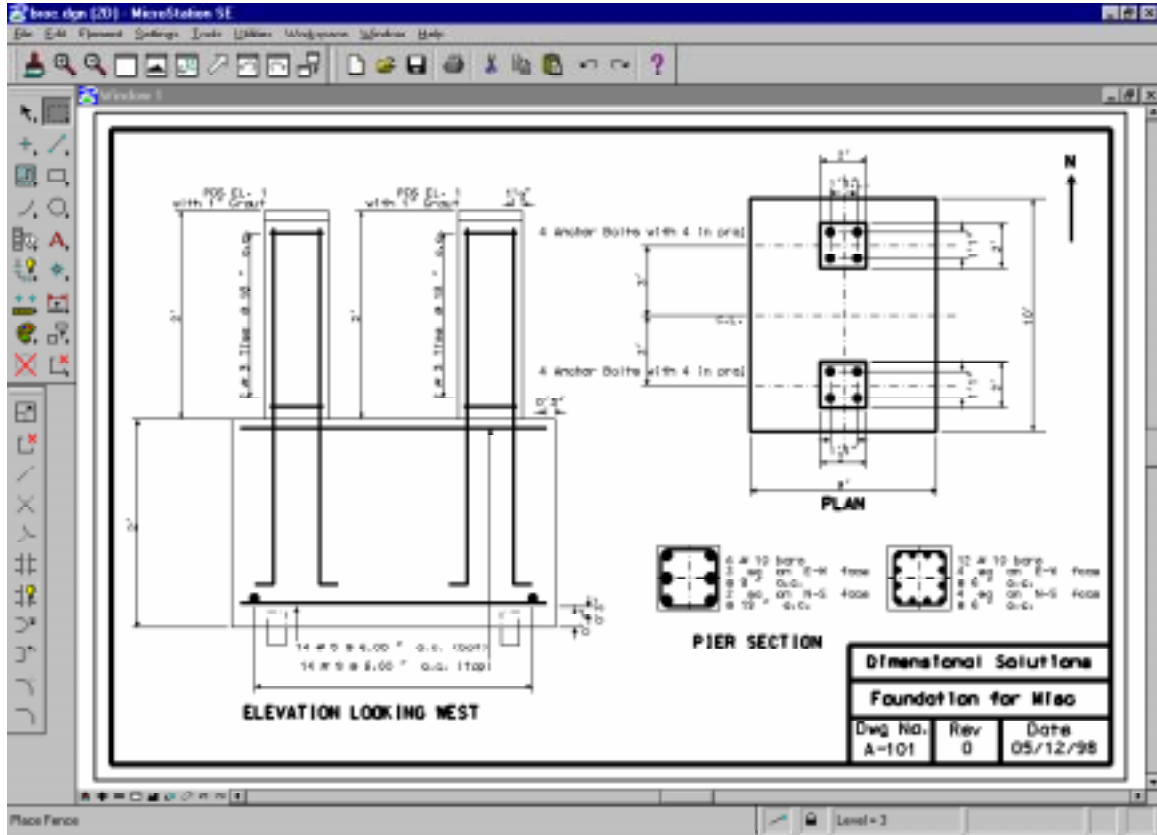


You no longer have to hand draw design sketches for your designer/draftsperson. You can now spend the realized timesavings in doing other important tasks. This detailed sketch serves, as a valuable tool to all of your customers, be they your clients, or your estimators or your construction contractors.



Construction Drawing

You can plot a detailed construction drawing in the CAD software after you complete foundation analysis/design in Combined3D. Shown below is a drawing created automatically in Microstation SE. You can draw your company border or title sheet, north arrow symbol and even specify drawing settings such as text size and others.



Since a construction drawing is the final deliverable after any foundation analysis or design, Combined3D automates this process and completes the entire drawing in a few seconds. Think of the significant time that you will save in performing this process.

Combined3D is an integrated and complete solution to foundation design. It will increase your productivity and reduce your work hours significantly. To gain a competitive advantage, call us now.

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