

**C**omputer Aided Design or CAD is a generic term applied to any number of software programs such as AutoDesk, MicroStation or SolidWorks that allow a computer operator to design buildings, objects, clothing or an array of systems such as mechanical or electrical. The uses for CAD work are as varied as the industries that use this design tool.

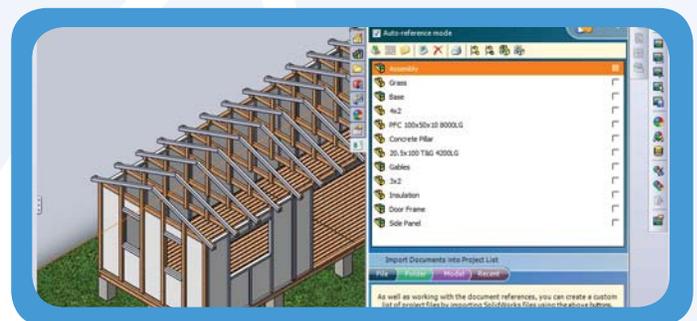
With CAD software, design changes can be made with relative ease. Common elements can be quickly repeated by drawing from a “library” of commonly used elements such as scale references, compass directions, connectivity symbols, equipment block diagrams and other required elements. The level of detail possible in CAD is considerable, generally allowing for better and quicker project construction.

A skilled project manager has the ability to review a variety of CAD systems like mechanical, electrical and communications to see if there are going to be any conflicts. Conflicts are areas where two or more systems may potentially run into one another or where the space accommodating a system is insufficient. These conflicts can be remedied at the CAD stage so that costly delays in re-design can be avoided as the building is being constructed.

Some of the more advanced CAD software such as Solid Works can show a 3D rendering of a previously 2D flat

drawing. This advancement in CAD makes the viewing of drawings more easily interpreted by the lay person. In some 3D software applications, conflicts are automatically detected alerting the designer to potential problems. Systems can be colour coded for ease of identifying where potential conflicts may occur. With the latest 3D CAD software it is possible to have individually drawn items identified and a detailed bill of materials presented for any given construction. Costing for a project can therefore be almost instantaneous, saving time and money.

Modern CAD representations are easily sent to remote sites on laptops and tablets and made available to contractors for bidding purposes, avoiding any ambiguity as to what the contractor is quoting on. On-site changes to documents can be readily made and a record of those changes kept for future reference. As-built drawings, a documented representation of the completed project are far more easily accomplished with CAD capabilities than the manual drawings of days gone by.



Fancom Connects has in-house CAD services specifically geared towards all of the communications systems we design for Division 27 and Division 28 of the Master Format for building specifications. We have AutoDesk and Microstation capabilities and can have 3-D renderings done if desired by the customer.

For more information on CAD Services and how Fancom can bring life to your project vision please call us at 905-990-4845 or send an email to [info@fancomni.com](mailto:info@fancomni.com) indicating “CAD” in the subject line.