



CADD Office Standards

AutoCAD Line weights

We use various line weights for different purposes. This chart shows some typical uses for our drawings. These are technical pen nib sizes expressed as millimetres (mm); we can use these as actual line weight sizes on paper.

Cross Section - Hatching	Shade, Shadows & Values rendering	Dimensions & background objects	General Lettering	General & Middle-ground objects	Foreground and very close objects	Title blocks & Borders
0.25						
	0.30					
		0.35				
			0.5			
					0.6	
					0.7	

There are other guidelines that exist that cover the use of line weights in drawings. CSA, the Canadian Standards Association, recommends in the *Standards for Computer-Aided Design Drafting for buildings* (CSA publication B78.5-93) the following line weight ranges are used: 1.0, 0.7, 0.5, 0.35, 0.25, 0.18 (all mm). These follow the $\sqrt{2}$ progression used in *ISO standard 128*.

Group A	Group B	Group C	Group D
1.0	0.7	0.5	0.35
0.7	0.5	0.35	0.25
0.5	0.35	0.25	0.18

The intent is to use proportional sizes that will maintain the appearance needed when the drawings are reproduced in various media and enlargements.

CADD Office Standards – Line weights

Drafting program Office Standards

As you can see there are many options, and each office may choose to set up their own interpretation of these standards.

In the CADD Lab, we have set up our own, known as our **Office Standards**.

For our use, we have decided to use the following settings:

Paper size	Background, reference objects,	Section hatching, annotation lines (centerlines, hidden lines, etc.)	Text	Object Outline	Borders and Section cut lines.
A	0.18	0.18	0.25	0.35	0.5
B	0.18	0.25	0.35	0.5	0.7
D	0.25	0.35	0.5	0.7	1.0

Check plots

We use a technique in the lab to create a "check plot" that is smaller than full size. This is typically a D-Size drawing plotted on a B-Size paper (11" x 17"). This would be exactly 1/2 size plotting of the D-Size sheet. (Similar for metric.)

Rather than having to adjust all the scales, we can plot the D-Size title block at one-half size to the 11x17 paper (the HP 1120C printers). The easiest method is to use the DWF output to create a virtual page. Using the DWF viewer – a free download from Autodesk – you can view and print the virtual page to paper at a reduced scale. This technique will be demonstrated in class.

One problem with our technique is that the line weights are not adjusted in this "half-size" print. If you requested the very thick line (magenta colour on screen) you will get the full 0.7mm line on the 11x17 paper; it is not scaled down as well. Using the DWF output, the DWF Viewer will adjust the line weight when printing the reduced version.

We can also set up a second Plot Style to adjust the line weights for plotting at half size for the check plots directly from AutoCAD.