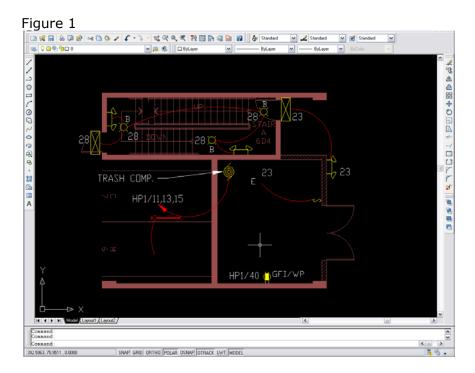
Procedure for creating a print-ready CALS file thru AutoCad 2005

v1.0 1-26-2006 ©2006 Bill's Blueprint, Inc.

1) Open your DWG in AutoCad

For these instructions we will be using a drawing called 'sample.dwg' (see fig. 1). The sample file represent many of the elements you might have in a typical AutoCad file: multiple colors, multiple layers, multiple lineweights needed, etc.



2) Configure the CALS driver

Autocad 2005 ships with the CALS driver you will need, but it will not be setup by default. It set it up, go to the Tools>Options menu, and click on the 'Plot and Publish' tab. From there, click on the 'Add or Configure Plotter' button (see fig.2).

Options	
urrent profile: < <unnamed profile="">></unnamed>	🞲 Current drawing: sample.dwg
Files Display Open and Save Plot and Publish Syst	stem User Preferences Drafting Selection Profiles
 Default plot settings for new drawings Use as default output device 	General plot options When changing the plot device:
Arox Color	Keep the layout paper size if possible
Use last successful plot settings Add or Configure <u>P</u> lotters	Use the plot device paper size System printer spool alert:
 Plot to file 	Always alert (and log errors)
Plot to file Default location for plot to file operations:	OLE plot guality:
	Automatically select
Background processing options Enable background plot when:	objects
Plot and publish log file Automatically save plot and publish log	Specify plot offset relative to O Printable area O Edge of paper
Save one continuous plot log	Plot Stamp Settings
Save one log per plot	Plot Style Table Settings

Double click on the 'Add-A-Plotter Wizard' icon. That will open up the plotter dialog screen. Click 'Next' at the initial screen, and then select 'My Computer' and click 'Next' again. From the selection menu on the left, click on 'Raster File Formats'. Then, from the right side, select the driver called "*Dimensional CALS Type 1 (CCITT G4 2D Compression)*" (see fig. 3). Then click 'Next'.

Begin Network Plotter System Printer	Select your plotter manufacturer and model. If your plotter isn't listed, consult your plotter documentation for a compatible plotter.					
Plotter Model Select Driver Import Pcp or Pc2 Ports	Optionally, if you have an installation disk containing an HDI driver, choose Have Disk. A Browse for HIF File dialog box is displayed for you to locate and install the HIF file attached to the HDI driver.					
Plotter Name	<u>M</u> anufacturers	Models				
Finish	Autodesk ePlot (DWF) CalComp Hewlett-Packard Oce Raster File Formats Xerox	CALS MIL-R-28002A Type 1 (CCITT G4 2D Com A Dimensional CALS Type 1 (CCITT G4 2D Compre Independent JPEG Group JFIF (JPEG Compressi MS-Windows BMP (Uncompressed DIB) Portable Network Graphics PNG (LZH Compressi				
	This model is supported by Raster File Format HDI - by Autodesk,					
	Inc.	<u>Hard bux m</u>				

Click 'Next' again, then select 'Plot to File' and click 'Next' again. Name this plotter whatever you wish (something identifiable, like CALS Plotter), and click 'Next' again.

Now that the driver is installed, we need to configure paper sizes. Click on the 'Edit Plotter Configuration' button. That will bring up the config editor (see fig. 4). There are several pre-defined paper sizes, but oddly 24 x 36 (the most common size) is absent from the list. You should scroll through the standard sizes listed to see is a size you regularly use is also missing. Once you know what size you need to add, click on 'Custom Paper Sizes', and click the 'Add' button. That brings up the 'Custom Paper Size' wizard (see fig. 5).

Select 'Start from scratch' and click 'Next'. Enter your desired sizes and units. For this example we are using 36 width, 24 height, and inches (see fig. 6). Click 'Next'. Since we are plotting to file, and not to paper, we don't need to worry about printer margins. So, just set all the margins to 0.00 and click 'Next' (see fig. 7). Name this custom paper size something appropriate (ours is named '24 x 36 inches') and click 'Next'. Again, name the new configuration something appropriate, and click 'Next' and then click 'Finish'.

igure 4	
Plotter Configuration Editor - Dimensional CALS Type ?	×
General Ports Device and Document Settings	_
Modily Standard Paper Siges NSI D (22 00 x 34 00 Inches) NNSI D (22 00 x 17 00 Inches) NNSI C (22 00 x 17 00 Inches) Width 1183 0mm Height 841 0mm LB: 12.8mm, 12.8mm Printable Area: 1163.4mm x	
Import Save As Defaults	
OK Cancel Help	5



Figure 6

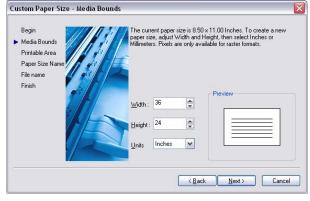
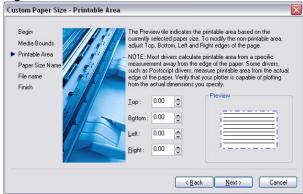


Figure 7



3) Create your CALS file

Back in the sample, go to File>Plot. From the plotter drop-down menu, select the plotter you just made (if you created custom sheets sizes, it will have a .pc3 after the name). Then select your desired sheet size (see fig. 8). Select your plot area (window, extents, etc.) check the 'center the plot' box. Enter the drawing scale. Since our sample is just a test, we have selected 'scale to fit'.

If you have a CTB or other pen weight file you need to load, do it now. Select your file from the 'Plot Style Table' menu in the upper right corner.

IMPORTANT: If you do not have a special pen table to load, select 'monochrome' from the list. Otherwise all your colors will become a greyscale, becoming very difficult to read.

A typically configures plot dialog is shown in figure 9.

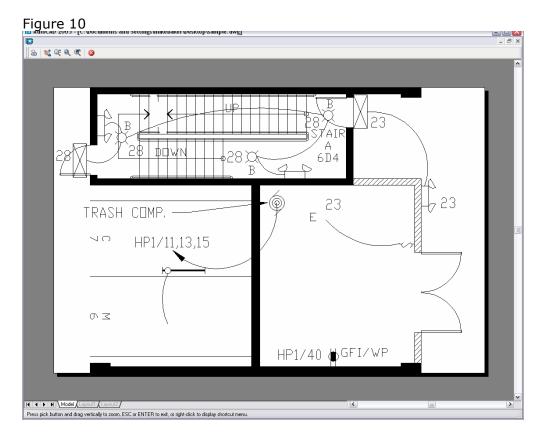
Finally, click on 'Preview' to see what your CALS file will look like (fig 10). If it looks ok, then right-click and select 'plot'. If not, hit Esc and make whatever change to the plot settings are needed, then preview again.

Figure 8	Fig	ure	8
----------	-----	-----	---

Plot - Mo	del					?
age setup -				Plot style table	(pen assignment	ts) —
N <u>a</u> me:	<none></none>	v	Add	None		• 6
rinter/plotte	er			Shaded viewpo	ort options	
la <u>m</u> e:	🙀 Dimensional CALS Type 1 (C	CITT G4 2D Compressio 💌	Properties	Sha <u>d</u> e plot	As displayed	~
lotter:	Dimensional CALS Type 1 (CCITT	G4 2D Compression) R	<u>← 8,5″→</u>	Quality	Normal	~
Vhere:	File			DPI	150	
escription:			,0, — ,	Plot options	: <u>k</u> ground	
aper size		N	umber of copies	Plot objec	t lineweights	
-	50 × 11.00 Inches)	~	1	Plot with	plot styl <u>e</u> s	
24 x 36 incl	nes			Plot pape	rspace last	
	89.00 x 841.00 MM) 1.00 x 1189.00 MM)			Hide pape	rspace objects	
ISO A1 (841.00 × 594.00 MM) paper		Plot stamp on				
ISO A1 (594.00 × 841.00 MM) ISO A2 (594.00 × 420.00 MM)		m. 🗸	Save changes to layout			
ISO A3 (42	0.00 × 594.00 MM) 0.00 × 297.00 MM)	172	14.12		- ·	
FISO A3 (297.00 × 420.00 MM) ISO A4 (297.00 × 210.00 MM)		1	inch =	O Portrait		
	0.00 x 297.00 MM) 	67.54	units	Portrait O Landscap	P	
ANSI F (40.00 x 28.00 Inches) ANSI F (28.00 x 40.00 Inches) ANSI E (44.00 x 34.00 Inches)		le (ineweights	Plot upsid		-	
ANSI D (34 ANSI D (22	.00 x 44.00 Inches) .00 x 22.00 Inches) .00 x 34.00 Inches)	Apply I	to Layou <u>t</u> C	K Cance	I <u>H</u> elp	
ANSI C (22	.00 x 17.00 Inches)			125.0	0.000	4.5.

Figure 9

Plot - Mod	lel						?
Page setup	<none> Add</none>			Plot style table (pen assignments)			
Printer/plotte	r				Shaded viewpo	ort options	
Na <u>m</u> e:	🚱 Dimensional CALS Type 1 (CCITT G	4 2D Compressi	o 🔽 🛛 P <u>r</u> ope	rties	Sha <u>d</u> e plot	As displayed	~
Plotter:	Dimensional CALS Type 1 (CCITT G4 2D Compression) R			Quality	Normal	~	
Where:	File K-36.0"-+		DPI	150			
Description:	-			<u>•</u>	Plot options	t lineweights	
Paper size 24 × 36 inches		Number of copies			Plot with plot styles		
Plot area		Plot scale			Hide paperspace objects		
What to plot: Extents		🗹 Fịt to j	oaper		Plot stamp	oon	
		Scale: Custom		~	Sa <u>v</u> e changes to layout		
Plot offset (origin set to printable area)			1 inc	h≘	Drawing orientation		
X: 0.617348 inch ✓ ⊆enter the plot Y: -0.000000 inch			14.25 UN	its	OPortrait		_
			Scale (inewei		Eandscape Plot upsid		Α



This particular sample contains no custom lineweights or screening. If you need certain colors screened or need special lineweights, your need to load a plot style table before plotting. For example, in our sample, the walls made with color 15. By creating a custom CTB file that makes <u>color 15</u> **50% screened**, we are able to create a different look (see fig. 11). In this case, the walls are screened but the arrows and text are still solid black.

