

AutoCAD Plotting from A to Z

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Plotting can be one of the more confusing aspects of using AutoCAD software and AutoCAD verticals. When the time comes to plot, all you want is your file on paper, but the options seem overwhelming. PC3, PMP, STB, CTB...so many files. What should you use and when? Then there are file types. Should you plot to PDF or DWF™? What is the difference? When should you use each one? Which drivers should you use for each file type? What are the differences between plotting from AutoCAD on a PC and plotting from AutoCAD on a Mac®? Why are your margins so big? Have you ever felt lost while trying to plot? Ever wondered what all those extra options are that you never use? Then this class is for you. Come and see just how easy plotting can be.

Learning Objectives

At the end of this class, you will be able to:

- Create custom PC3 files and modify them so you have extra AutoCAD plotting options.
- Know the difference between CTB and STB files and when it is best to use both.
- Troubleshoot common plotting problems that may arise.
- Plot files while using AutoCAD for MAC.

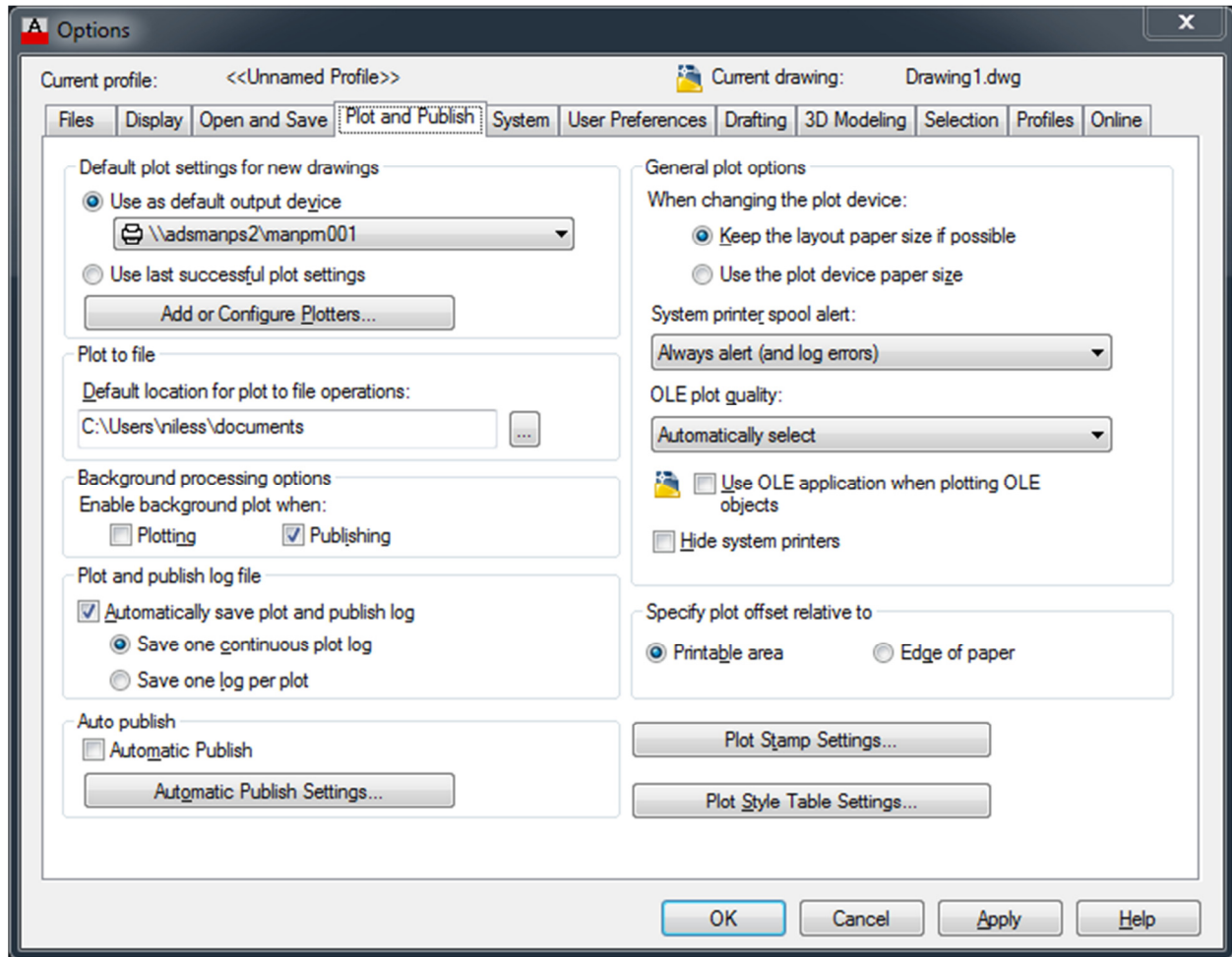
About the Speaker

Shawn Niles is the Product Support Team Lead for the America's team at Autodesk based in Manchester, NH. In this role, Shawn supports on a daily basis requests from customers dealing with all aspects of AutoCAD, AutoCAD for MAC, Design Review, Trueview, and Autodesk 360. Before joining Autodesk, Shawn spent several years working as a CAD manager in the industry.

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Section 1: 'Plot and Publish' tab in Options

Many of the options you will use when plotting in AutoCAD can be setup beforehand in the Options Dialog box on the 'Plot and Publish' tab. This is a great first place to start when it comes to setting up plot options. The image below shows what this box looks like:



Many of these options might be left on their default setting and never changed, and that's Ok. But there are certain settings that are important to make sure are set to conform to the way you want to plot. Take a look below to see which settings you should really set before you start to plot. Keep in mind that most of these can also be set in the plot dialog box itself, but setting them here may save you from having to set it on each individual plot down the road.

Default Plot Settings For New Drawings

Controls default plotting settings for new drawings or drawings created in AutoCAD Release 14 or earlier that have never been saved in AutoCAD 2000 or later format.

Use As Default Output Device

Sets the default output device for new drawings and for drawings created in AutoCAD Release 14 or earlier that have never been saved in AutoCAD 2000 or later format. The list displays any plotter configuration files (PC3) found in the plotter configuration search path and any system printers that are configured in the system.

Use Last Successful Plot Settings

This option will set the plotting settings to match those of the last successful plot.

Add or Configure Plotters

This option will display the Plotter Manager (a Windows system window). You can add or configure a plotter with the Plotter Manager.

Plot to File

This option will specify the default location for plot to file operations.

Background Processing Options

This option controls whether background plotting is turned on or off for plotting and publishing. You can use background plotting to start a job you are plotting or publishing and immediately return to work on your drawing while your job is plotted or published as you work. (BACKGROUNDPLOT system variable) Background plot and publish details are available through the Plot and Publish status bar icon shortcut menu.

Enable Background Plotting When

Plotting: Specifies that plot jobs are processed in the background. This setting is also affected by the BACKGROUNDPLOT system variable.

Publishing: Specifies that published jobs are processed in the background. This setting is also affected by the BACKGROUNDPLOT system variable.

Note: When -PLOT, PLOT, -PUBLISH, and PUBLISH are used in a script (SCR file), the BACKGROUNDPLOT system variable value is ignored, and -PLOT, PLOT, -PUBLISH, and PUBLISH are processed in the foreground.

Plot and Publish Log File

Controls options for saving a plot and publish log file as a comma-separated value (CSV) file that can be viewed in a spreadsheet program. To view or change the location of the log file, see the Files tab in the Options dialog box. This log file contains information about plot and publish jobs such as: Job ID, Job name, Sheet set name, Category name, Date and time started and completed, Sheet name, Full file path, Selected layout name, Page setup name, Named page setup path, Device name, Paper size name, and Final status.

Automatically Save Plot and Publish Log

Option will specify that a log file that contains information about all plot and publish jobs is automatically saved.

Save One Continuous Plot Log

Specifies that a single log file that contains information about all plot and publish jobs is automatically saved.

Save One Log File Per Plot

Specifies that a separate log file is created for each plot and publish job.

AutoPublish

When this option is selected, drawings are published to DWF, DWFx, or PDF files automatically when you save or close a drawing file. (AUTOMATICPUB, AUTODWFPUBLISH system variables)

General Plot Options

When changing the plot device:

Keep the Layout Paper Size If Possible

This option will use the paper size specified in the Page Setup dialog box as long as the selected output device can plot to this paper size. (PAPERUPDATE system variable = 0) If the selected output device cannot plot to this paper size, the program displays a warning message and uses the paper size specified either in the plotter configuration file (PC3) or in the default system settings if the output device is a system printer.

Use the Plot Device Paper Size

This option will use the paper size specified either in the plotter configuration file (PC3) or in the default system settings if the output device is a system printer.
(PAPERUPDATE system variable = 1)

System Printer Spool Alert

This option controls whether you are alerted when the plotted drawing is spooled through a system printer because of an input or output port conflict.

- *Always Alert (And Log Errors):* Alerts you and always logs an error when the plotted drawing spools through a system printer.
- *Alert First Time Only (And Log Errors):* Alerts you once and always logs an error when the plotted drawing spools through a system printer.
- *Never Alert (And Log First Error):* Never alerts you and logs only the first error when the plotted drawing spools through a system printer.
- *Never Alert (Do Not Log Errors):* Never alerts you or logs an error when the plotted drawing spools through a system printer.

OLE Plot Quality

This option will set the default plot quality for OLE objects. (OLEQUALITY system variable)

Use OLE Application When Plotting OLE Objects

This option will control whether the source application of an embedded OLE object loads when plotting.

(OLESTARTUP system variable)

Hide System Printers

This option will control whether Windows system printers are displayed in the Plot and Page Setup dialog boxes. This option hides standard Windows system printers only. It does not hide Windows system printers that have been configured using the Add-a-Plotter wizard. You can control the size of the list of devices in the Plot and Page Setup dialog boxes by moving a device's PC3 file out of the Plotters folder and its subfolders. (PLOTTERMANAGER)

Specify Plot Offset Relative To

This option will control whether the plot offset is relative to the printable area or to the edge of the paper. (PLOTOFFSET system variable)

Printable Area

This option will specify that the plot offset is relative to the printable area.

Edge of Paper

This option will specify that the plot offset is relative to the edge of the paper.

Plot Style Table Settings

The following options are displayed:

Default Plot Style Behavior for New Drawings

Controls the plot style mode, Color-Dependent or Named, that is used when opening a drawing that was created in a release prior to AutoCAD 2000 or when creating a new drawing from scratch without using a drawing template. A plot style is a collection of property settings defined in a plot style table and applied when the drawing is plotted. Changing the default plot style setting by using the Options dialog box does not affect the current drawing. The default plot style setting is Use Color Dependent Plot Styles. The Plot Style Control on the Properties toolbar is unavailable by default. The Plot Style Control is available when you select the Use Named Plot Styles option and open a new drawing. (PSTYLEPOLICY system variable)

Use Color Dependent Plot Styles

Uses color-dependent plot styles in both new drawings and drawings created in AutoCAD Release 14 or earlier. (PSTYLEPOLICY system variable = 1) Color-dependent plot styles use the numbers from the AutoCAD Color Index to create a plot style table with a .ctb file extension. Each color is defined by a name or number ranging from 1 to 255. You can assign each color number to a different pen on a pen plotter to achieve different property settings in the plotted drawing. If this option is selected, a plot style is created for each color setting. Once a drawing is saved with Use Color Dependent Plot Styles as the default, you can convert it to Use Named Plot Styles using the CONVERTCTB and CONVERTPSTYLES commands.

Use Named Plot Styles

Uses named plot styles in both new drawings and drawings created in earlier versions. The plot style is defined in the plot style table attached to the layout. Named plot style tables are files with the file extension .stb. (PSTYLEPOLICY system variable = 0) Once a drawing is saved with Use Named Plot Styles as the default, you can convert it to Use Color Dependent Plot Styles using the CONVERTCTB and CONVERTPSTYLES commands. However, once you use CONVERTPSTYLES to convert a drawing from using a named plot style table to a color plot style table, you cannot use CONVERTPSTYLES to convert it back to using a named plot style table.

Current Plot Style Table Settings

This option specifies the current plot style table settings that are applied to new drawings.

Default Plot Style Table

This specifies the default plot style table to attach to new drawings. A plot style table is a file with a .ctb or an .stb extension that includes and defines plot styles. If you are using color-dependent plot styles, this option lists all color dependent plot style tables found in the search path as well as the value of None. If you are using named plot styles, this option lists all named plot styles tables.

Default Plot Style for Layer 0

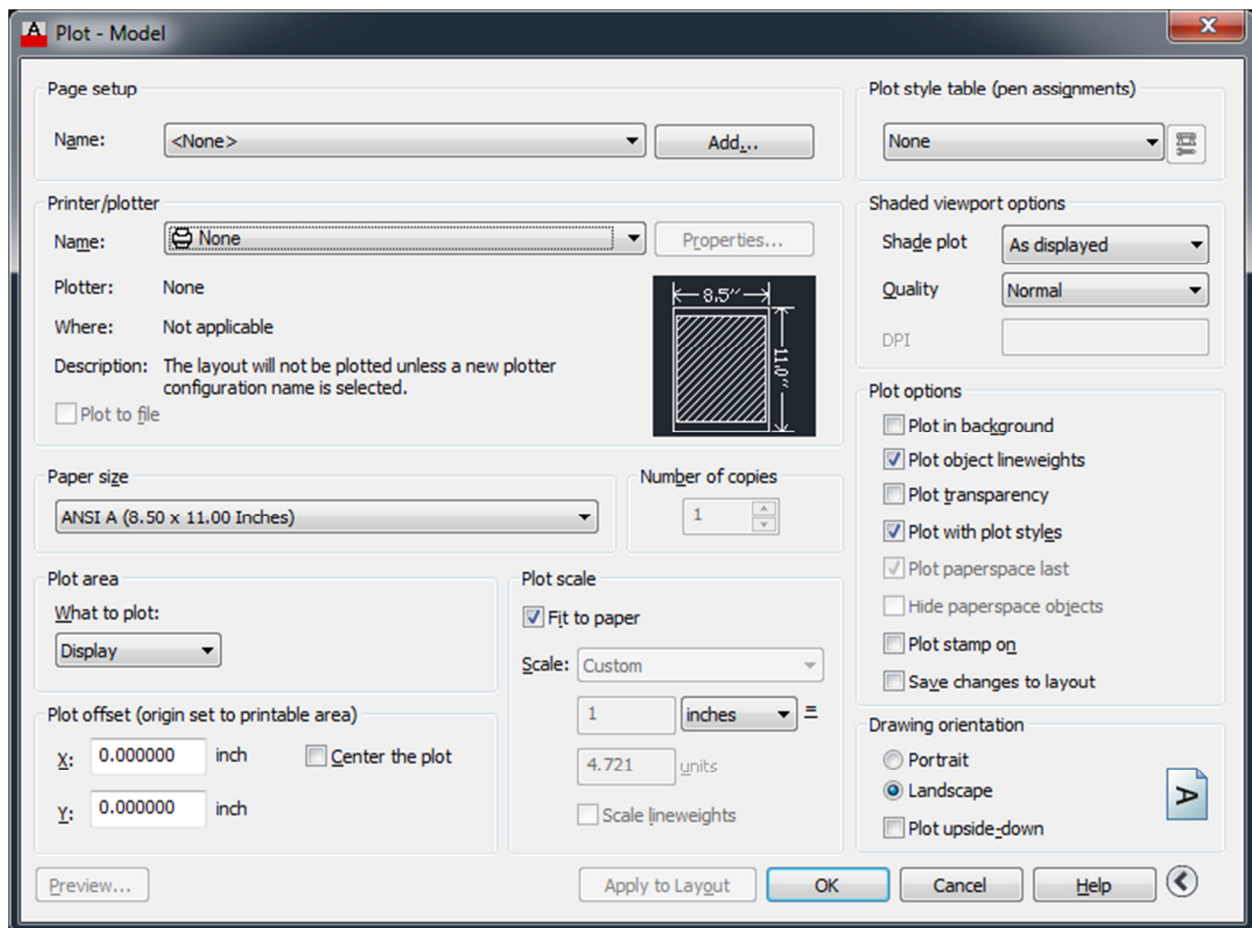
This option specifies the default plot style for all layers in a drawing when opening a drawing that was created in a release prior to AutoCAD 2000, or for Layer 0 when creating a new drawing from scratch without using a drawing template. (DEFLPLSTYLE system variable)

Default Plot Style for Objects

Specifies the default plot style for new objects in a drawing when opening a drawing that was created in a release prior to AutoCAD 2000, or when creating a new drawing from scratch without using a drawing template. (DEFPLSTYLE system variable)

Add or Edit Plot Style Tables

This displays the Plot Style Manager (a Windows Explorer window), where you can create or edit plot style tables.

Section 2: Plot Dialog Box

The first thing you'll want to do after opening the Plot dialog box is expand it so you see all the options available. You can do this by using the arrow in the lower right corner of the box. Similar to the first box above, some of these settings might not ever need to be changed. See below for a description of what each section will affect:

Page Setup

Use this option if you want to save all the settings for future plotting. You can choose a Page Setup and it will remember the settings you used for that particular plot. This field is also essential if you will be using the Publish feature, which will be discussed later in the document.

Printer/Plotter

Use this section to choose which device you want to print to. This field is tied into the Windows plotters. Any plotter that you see in your Windows plotters section should show up in this dropdown box. If it is not, then you likely have the 'Hide System Printers' box checked in the Options dialog box / Plot and Publish tab. This drop down list will also show any PC3 files that have been created. Clicking on the Properties button will bring you into the properties for that particular device. The options here are controlled by the print driver, so they will be different for each device. Going into the properties allows you to set up things like custom page sizes, adjust margins, change DPI, and the like. See below for further description of the options in this area:

Properties

Displays the Plotter Configuration Editor (PC3 editor), in which you can view or modify the current plotter configuration, ports, device, and media settings. If you make changes to the PC3 file using the Plotter Configuration Editor, the Changes to a Printer Configuration File dialog box is displayed.

Plotter

This section displays the plot device specified in the currently selected page setup.

Where

This section displays the physical location of the output device specified in the currently selected page setup.

Description

Displays descriptive text about the output device specified in the currently selected page setup. You can edit this text in the Plotter Configuration Editor.

Plot to File

Plots output to a file rather than to a plotter or printer. The default location for plot files is specified in the Options dialog box, Plot and Publish tab, under Default Location for Plot-to-File Operations. If the Plot to File option is turned on, when you click OK in the Plot dialog box, the Plot to File dialog box (a standard file navigation dialog box) is displayed.

Paper Size

This section displays standard paper sizes that are available for the selected plotting device. If no plotter is selected, the full standard paper size list is displayed and available for selection. If the selected plotter doesn't support the layout's selected paper size, a warning is displayed, and you can select the plotter's default paper size or a custom paper size. A default paper size is set for the plotting device when you create a PC3 file with the Add-a-Plotter wizard. The paper size that you select in the Page Setup dialog box is saved with the layout and overrides the PC3 file settings. The actual printable area of the page, which is determined by the selected plotting device and paper size, is indicated in the layout by a dashed line. If you are plotting a raster image, such as a BMP or TIFF file, the size of the plot is specified in pixels, not in inches or millimeters. If the size you want is not here, you may need to go into the properties of that device and add it. The option to specify multiple plot copies is not available when plotting to file.

Plot Area

Use this section to specify the portion of the drawing to be plotted. See below for how each section is used:

Layout/Limits

When plotting a layout, plots everything within the printable area of the specified paper size, with the origin calculated from 0,0 in the layout. When plotting from the Model tab, plots the entire drawing area that is defined by the grid limits. If the current viewport does not display a plan view, this option has the same effect as the Extents option.

Extents

This will plot the portion of the current space of the drawing that contains objects. All geometry in the current space is plotted. The drawing may be regenerated to recalculate the extents before plotting.

Display

This will plot the view in the current viewport in the selected Model tab or the current paper space view in the layout.

View

This will plot a view that was previously saved with the VIEW command. You can select a named view from the list. If there are no saved views in the drawing, this option is unavailable. When the View option is selected, a View list is displayed that lists the named views that are saved in the current drawing. You can select a view from this list to plot.

Window

This will plot any portion of the drawing that you specify. When you select Window, the Window button becomes available. Click the Window button to use the pointing device to specify the two corners of the area to be plotted, or enter coordinate values.

Plot Offset

Specifies an offset of the plot area relative to the lower-left corner of the printable area or to the edge of the paper, depending on the setting made in the Specify Plot Offset Relative To option (Options dialog box, Plot and Publish tab). The Plot Offset area of the Plot dialog box displays the specified plot offset option in parentheses.

The printable area of a drawing sheet is defined by the selected output device and is represented by a dashed line in a layout. When you change to another output device, the printable area may change. You can offset the geometry on the paper by entering a positive or negative value in the X and Y offset boxes. The plotter unit values are in inches or millimeters on the paper.

Center the Plot

Automatically calculates the X and Y offset values to center the plot on the paper. This option is not available when Plot Area is set to Layout.

X

X specifies the plot origin in the X direction relative to the setting of the Plot Offset Definition option.

Y

Y specifies the plot origin in the Y direction relative to the setting of the Plot Offset Definition option.

Plot Scale

Plot Scale controls the relative size of drawing units to plotted units. The default scale setting is 1:1 when plotting a layout. The default setting is 'Fit to Paper' when plotting from the Model tab.

Fit to Paper

Scales the plot to fit within the selected paper size and displays the custom scale factor in the Scale, Inch =, and Units boxes.

Scale

Scale defines the exact scale for the plot. Custom defines a user-defined scale. You can create a custom scale by entering the number of inches (or millimeters) equal to the number of drawing units.

Note: You can modify the list of scales with SCALELISTEDIT.

Inch/mm/pixel

This specifies inches or mm for display of units in the Plot dialog box. The default is based on the paper size and changes each time a new paper size is selected. Pixel is available only when a raster output is selected.

Units

This specifies the number of units equal to the specified number of inches, millimeters, or pixels.

Scale Lineweights

Scales lineweights in proportion to the plot scale. Lineweights normally specify the linewidth of plotted objects and are plotted with the linewidth size regardless of the plot scale.

Plot Style Table (Pen Assignments)

Sets the plot style table, edits the plot style table, or creates a new plot style table.

Name

Name displays the plot style table that is assigned to the current Model tab or layout tab and provides a list of the currently available plot style tables. If you select New, the Add Plot Style Table wizard is displayed, which you can use to create a new plot style table. The wizard that is displayed is determined by whether the current drawing is in color-dependent or named mode.

Edit

Displays the Plot Style Table Editor, in which you can view or modify plot styles for the currently assigned plot style table.

Shaded Viewport Options

Specifies how shaded and rendered viewports are plotted and determines their resolution level and dots per inch (dpi). Rendered viewport options are not available in AutoCAD LT.

Note: When hardware acceleration is disabled or is enabled, but does not support Shadows, it is possible to plot a drawing that contains shaded viewports with unsupported hardware effects by the graphics card through software emulation. To enable the software emulation of hardware effects that are not supported by your graphics card, enter 3DCONFIG and click Manual Tune. In the Manual Performance Tuning dialog box, click Emulate unsupported hardware effects in software when plotting. The unsupported effects will not appear in the viewport in real-time, but will appear in the hardcopy or electronic file that is created during the plot process. (Not applicable to AutoCAD LT)

Shade Plot

Specifies how views are plotted. To specify this setting for a viewport on a layout tab, select the viewport and then, on the Tools menu, click Properties.

From the Model tab, you can select from the following options:

- **As Displayed.** Plots objects the way they are displayed on the screen.
- **Legacy Wireframe.** Objects in wireframe regardless of the way they are displayed on the screen, using the legacy SHADEMODE command.
- **Legacy Hidden.** Objects with hidden lines removed regardless of the way the objects are displayed on the screen, using the legacy SHADEMODE command.
- **Wireframe.** Plots objects in wireframe regardless of the way they are displayed on the screen.
- **Hidden.** Plots objects with hidden lines removed regardless of the way the objects are displayed on the screen.
- **Conceptual.** Plots objects with the Conceptual visual style applied regardless of the way the objects are displayed on the screen. (Not available in AutoCAD LT)
- **Realistic.** Plots objects with the Realistic visual style applied regardless of the way the objects are displayed on the screen. (Not available in AutoCAD LT)

- **Shades of Gray.** Plots objects with Shades of Gray visual style applied regardless of the way the objects are displayed on the screen.
- **Sketchy.** Plots objects with Sketchy visual style applied regardless of the way the objects are displayed on the screen.
- **X-ray.** Plots objects with x-ray visual style applied regardless of the way the objects are displayed on the screen
- **Shaded with Edges.** Plots objects with Shaded with Edges visual style applied regardless of the way the objects are displayed on the screen
- **Shaded.** Plots objects with Shaded visual style applied regardless of the way the objects are displayed on the screen
- **Rendered.** Plots objects as rendered regardless of the way they are displayed on the screen. (Not available in AutoCAD LT)
- **Draft.** Plots objects with the Draft render preset applied to produce very low quality rendering but in the fastest rendering speed. (Not available in AutoCAD LT)
- **Low.** Plots objects with the Low render preset applied to produce better quality rendering than Draft. (Not available in AutoCAD LT)
- **Medium.** Plots objects with the Medium render preset applied which offers a good balance between quality and render speed. (Not available in AutoCAD LT)
- **High.** Plots objects with the High render preset applied. (Not available in AutoCAD LT)
- **Presentation.** Plots objects with the Presentation render preset applied for photo-realistic rendered images and takes the longest to process. (Not available in AutoCAD LT)

Quality

Specifies the resolution at which shaded and rendered viewports are plotted.

You can select from the following options:

- **Draft.** Sets rendered and shaded model space views to be plotted as wireframe.
- **Preview.** Sets rendered and shaded model space views to be plotted at one quarter of the current device resolution, to a maximum of 150 dpi.
- **Normal.** Sets rendered and shaded model space views to be plotted at one half of the current device resolution, to a maximum of 300 dpi.
- **Presentation.** Sets rendered and shaded model space views to be plotted at the current device resolution, to a maximum of 600 dpi.
- **Maximum.** Sets rendered and shaded model space views to be plotted at the current device resolution with no maximum.
- **Custom.** Sets rendered and shaded model space views to be plotted at the resolution setting that you specify in the DPI box, up to the current device resolution.

DPI

Specifies the dots per inch for shaded and rendered views, up to the maximum resolution of the current plotting device. This option is available if you select Custom in the Quality box.

Plot Options

Specifies options for lineweights, transparency, plot styles, shaded plots, and the order in which objects are plotted.

Plot in Background

This option will specify that the plot is processed in the background. (BACKGROUNDPLOT system variable)

Plot Object Lineweights

Specifies whether lineweights assigned to objects and layers are plotted.

Plot Transparency

This option will specify whether object transparency is plotted. This option should only be used when plotting drawings with transparent objects.

Important: For performance reasons, plotting transparency is disabled by default. To plot transparent objects, select the Plot Transparency option. This setting can be overridden by the PLOTTRANSPARENCYOVERRIDE system variable. By default, the system variable honors the setting in the Page Setup and the Plot dialog boxes.

Plot with Plot Styles

Specifies whether plot styles applied to objects and layers are plotted.

Plot Paperspace Last

Plots model space geometry first. Paper space geometry is usually plotted before model space geometry.

Hide Paperspace Objects

This option will specify whether the HIDE operation applies to objects in the paper space viewport. This option is available only from a layout tab. The effect of this setting is reflected in the plot preview, but not in the layout.

Plot Stamp On

This option will turn on plot stamping. It places a plot stamp on a specified corner of each drawing and/or logs it to a file. Plot stamp settings are specified in the Plot Stamp dialog box, in which you can specify the information that you want applied to the plot stamp, such as drawing name, date and time, plot scale, and so on. To open the Plot Stamp dialog box, select the Plot Stamp On option, and then click the Plot Stamp Settings button that is displayed to the right of the option. You can also open the Plot Stamp dialog box by clicking the Plot Stamp Settings button on the Plot and Publish tab of the Options dialog box.

Save Changes to Layout

This option will save any changes that you make in the Plot dialog box to the layout. The next time you open the Plot Dialog box, the previous settings will be chosen.

Drawing Orientation

This option will specify the orientation of the drawing on the paper for plotters that support landscape or portrait orientation. The paper icon represents the media orientation of the selected paper. The letter icon represents the orientation of the drawing on the page.

Portrait

Orients and plots the drawing so that the short edge of the paper represents the top of the page.

Landscape

Orients and plots the drawing so that the long edge of the paper represents the top of the page.

Plot Upside-Down

Orients and plots the drawing upside down.

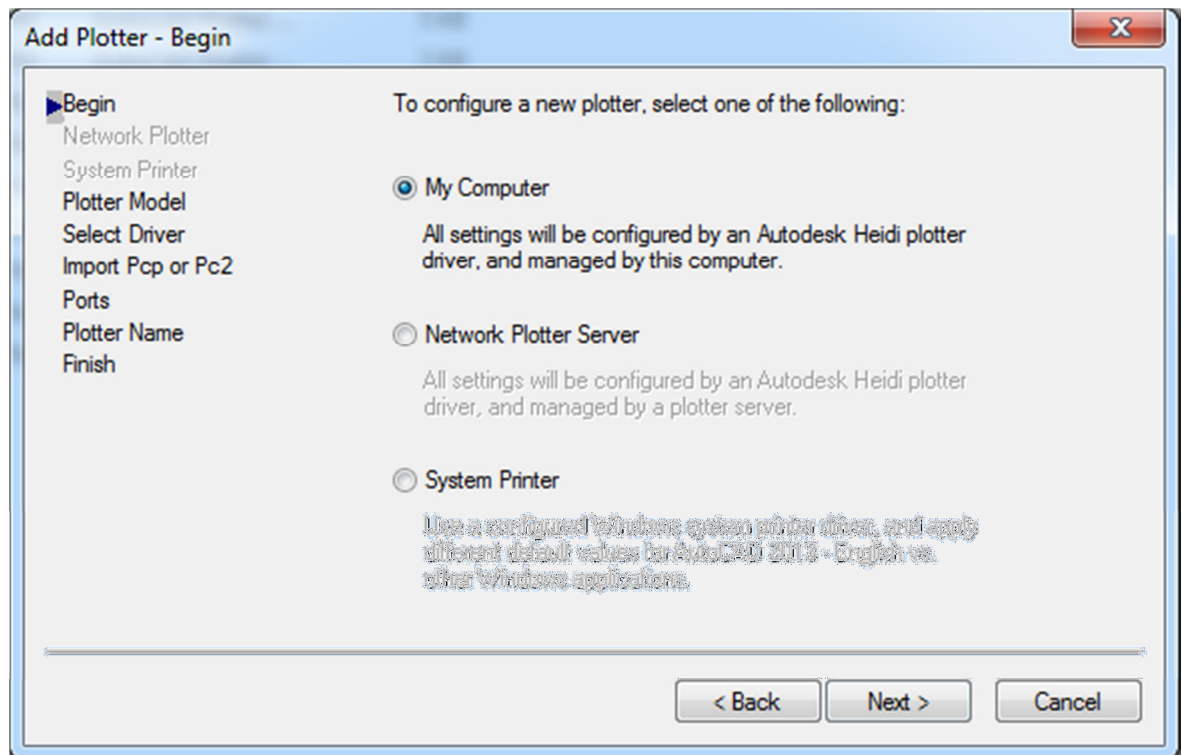
Note: Drawing orientation is also affected by the PLOTROTMODE system variable.

Section 3: PC3 Files

PC3 files allow you an easy way to configure plotter settings, such as color depth, media type, improved raster and vector print quality, media source and merge controls, at plot time. You can use PC3 files to save these settings for later use. Many new capabilities have been added to plotters over the past several years. Features such as color depth, media type, improved raster and vector print quality, media source and merge controls are now common on many devices. A plotter configuration file, or PC3 file, enables you to easily configure a plotter and to save the settings for later use. You can set up multiple configuration files for the same plotter by selecting a different configuration in the Plot dialog box.

Use the following steps to create a PC3 file:

- 1) In AutoCAD, on the File menu, click Plotter manager. (or type PLOTTERMANAGER at the command line)
- 2) In the Windows Explorer window that pops up, double-click the Add-a-Plotter Wizard icon.
- 3) Click 'Next' at the introduction page.
- 4) On the Add Plotter-Begin page, select the appropriate option for you. The box below shows the options.



- My Computer: The application uses an HDI driver for a plotter/printer connected to the computer.
 - Network Plotter Server: The application uses an HDI or a System Printer driver with a plotter/printer connected to another computer on the network.
 - System Printer: The application uses a System Printer installed on the computer. Select this option when you already have a System Printer configured and want to use different settings for the application compared to other Windows® applications.
- 5) Follow the prompts on the next page. The option that you chose is step 4 will determine which page will be displayed.
 - 6) If you want, select an older PCP or PC2 file in the Import dialog box. Click Next.
 - 7) Select the port that you want to plot to. Click Next.
 - 8) If you selected a network device in Step 4, this step will not be necessary. In the Plotter Name dialog box, enter a name for the device that you have just configured. Click Next. This step is very important. The name that you enter will be displayed in the dialog box when selecting a plotting device. You may also choose to configure the same device several different ways. For example, you may want to create a configuration for each page size you use. Make sure the name is descriptive to help you identify it later (for example, HP Design650 B size).
 - 9) On the Finish page, edit the settings for the device, calibrate the plotter, or finish creating the PC3 file.
 - 10) Click Finish.

The AutoCAD help files contain a wealth of information on PC3 files and all the different ways they can be modified/used. Go to Help within AutoCAD and type PC3 in the search window if you'd like to explore the many more options for modifying and using PC3 files.

A **PMP file** is a Plot Model Parameter file. The PMP file contains custom plotter calibration and custom paper size information associated with the PC3 file. Creating custom page sizes for a PC3 file will automatically create a PMP file. To create or edit a custom paper size for a nonsystem printer:

- 1) Type PLOTTERMANAGER at the command line.
- 2) In the Plotter Manager, double-click the PC3 file whose configuration you want to change.
- 3) In the Plotter Configuration Editor, Device and Document Settings tab, under the User Defined Paper Sizes & calibration, select Custom Paper Sizes.
- 4) Set a new paper size using one of the following methods:
 - a. To add a custom paper size, click Add and follow the steps in the Custom Paper Size wizard. You specify the size of the paper, the printable area, and a name for the new paper size.
 - b. To edit an existing paper size, under Custom Paper Sizes, select the paper size and click Edit. The Custom Paper Size wizard opens. Change any of the paper size settings.
 - c. Click OK.

The new or edited paper size is available in both the Plot and Page Setup dialog boxes when that PC3 file is selected.

Note: Creating a custom paper size for a nonsystem driver attaches a plot model parameter (PMP) file to the plotter configuration (PC3) file. The PMP file contains custom plotter calibration and custom paper size information. By default, PMP files are stored in the PMP Files folder.

Note: For a System printer, you will need to set custom page sizes in the Windows printer section. If you try and do this through the AutoCAD plot dialog box as you would for a nonsystem plotter, the options will be grayed out. The TS below is an older TS, but the same premise applies regarding adding custom sizes:

<http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=2884957&linkID=9240617>

Section 4: Publishing

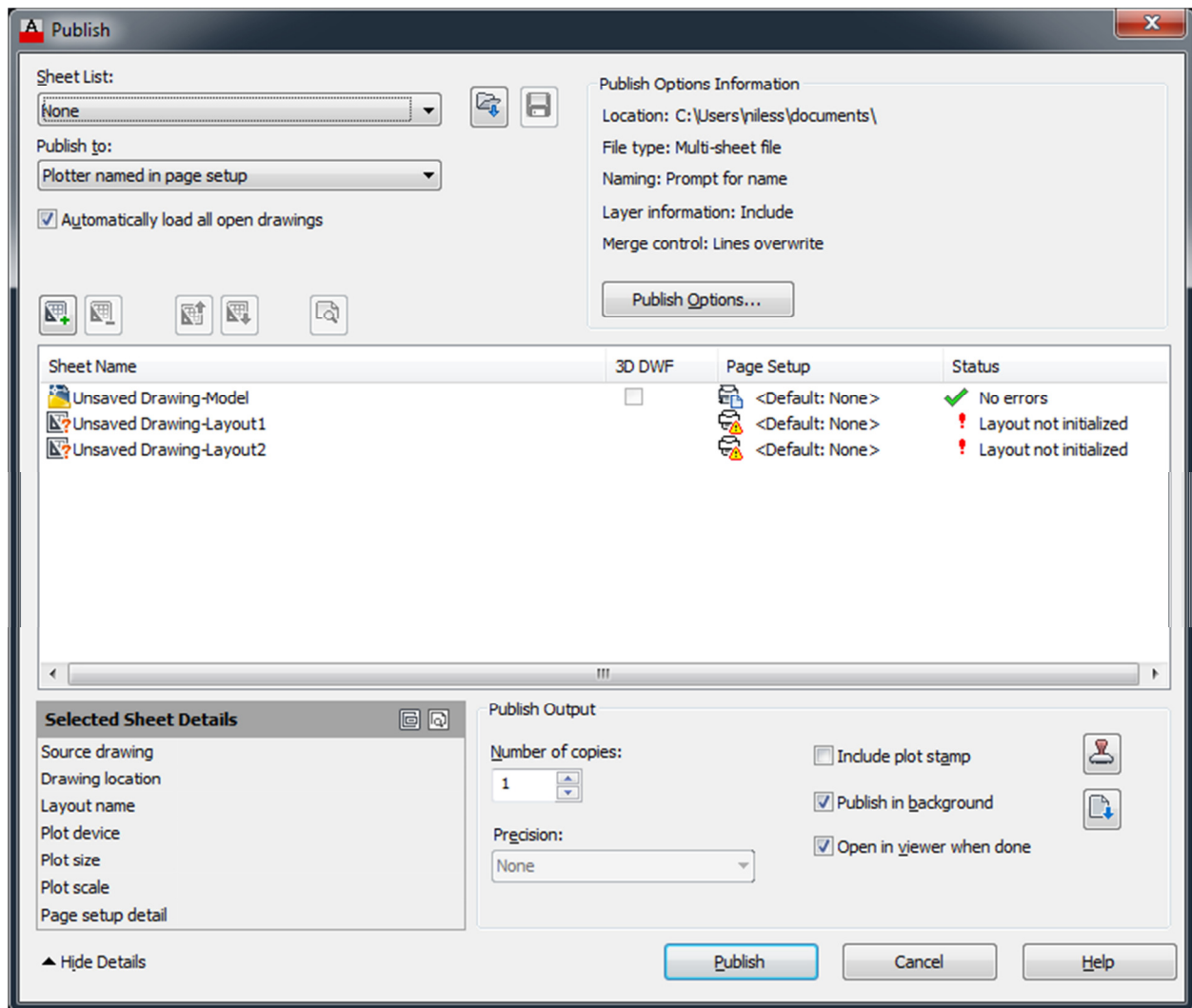
Publishing provides a streamlined alternative to plotting multiple drawings by providing compressed representations of drawings in a file that is easy to view and distribute.

You create an electronic drawing set by publishing drawings to a DWF, DWFx, or PDF file. An electronic drawing set is the digital equivalent of a set of plotted drawings. Alternatively, you can create a paper drawing set by publishing the sheet set to the plotter named in each sheet's page setup. A third way is to publish an entire sheet set from the Sheet Set Manager.

Using the Publish dialog box, you can assemble a collection of drawings to publish and save the list as a Drawing Set Descriptions (DSD) file. You can customize this collection of drawings for a specific user, and you can add and remove sheets as a project evolves. Once you've created a list of drawing sheets in the Publish dialog box, you can publish the drawings to any of the following:

- The plotter named in each sheet's page setup (including drawings that you want to plot to file)
- A single, multi-sheet DWF or DWFx file containing both 2D and 3D content
- A single, multi-sheet PDF file containing 2D content
- Multiple single-sheet DWF or DWFx files containing both 2D and 3D content
- Multiple single-sheet PDF files containing 2D content

Using 3D DWF publishing, you can create and publish DWF files of your three-dimensional models and view them with Autodesk Design Review.



Sheet List

Displays the current drawing set (DSD) or batch plot (BP3) file. BP3 files are not available in AutoCAD LT.

Load Sheet List Button

Displays the Load Sheet List dialog box (a standard file selection dialog box), in which you can select a DSD file or a BP3 (Batch Plot) file to load. Displays the Replace or Append dialog box if a list of drawing sheets is present in the Publish Drawing Sheets dialog box. You can either replace the existing list of drawing sheets with the new sheets or append the new sheets to the current list.

Save Sheet list Button

Displays the Save List As dialog box (a standard file selection dialog box), in which you can save the current list of drawings as a DSD file. DSD files are used to describe lists of drawing files and selected lists of layouts within those drawing files.

Publish To:

This option defines how to publish the list of sheets. You can publish to either a multi-sheet DWF, DWFx, or PDF file (an electronic drawing set) or to the plotter specified in the page setup.

Plotter Named in Page Setup

Choosing this indicates that the output devices given for each drawing sheet in the page setup will be used.

DWF, DWFx, and PDF

Selects the output file format: DWF, DWFx, or PDF.

Automatically Load All Open Drawings

When selected, the contents of all open documents (layouts and/or model space) are automatically loaded in the publish list. When not selected, only the current document's contents are loaded in the publish list.

List of Sheets Buttons**Add Sheets Button**

Displays the Select Drawings dialog box (a standard file selection dialog box), in which you can select drawings to add to the list of drawing sheets. The layout names from those files are extracted, and one sheet is added to the list of drawing sheets for each layout and model. The initial drawing sheet names are constructed from the base drawing name and the layout name or the word Model separated by a dash (-).

Remove Sheets Button

This option will delete the selected drawing sheets from the list of sheets.

Move Sheet Up Button

This option will move the selected drawing sheets up one position in the list.

Move Sheet Down Button

This option will move the selected drawing sheets down one position in the list.

Preview Button

Displays the drawing as it will appear when plotted on paper by executing the PREVIEW command. To exit the print preview and return to the Publish dialog box, press ESC, press ENTER, or right-click and then click Exit on the shortcut menu.

Note: 3D DWF and DWFx files are not available in AutoCAD LT.

Sheets to Publish

This section contains the list of drawing sheets to be included for publishing. Click the page setup column to change the sheet's settings. Use the shortcut menu to add sheets or make other changes to the list.

Sheet Name

This combines the drawing name and the layout name with a dash (-). It will include the Model tab only if the 'Include Model When Adding Sheets' option is selected. You can copy sheets by clicking 'Copy Selected Sheets' on the shortcut menu. You can change the name shown in Sheet Name by clicking 'Rename Sheet' on the shortcut menu. Drawing sheet names must be unique within a single DWF, DWFx, or PDF file. The shortcut menu also provides an option for removing all the sheets from the list.

Page Setup / 3D DWF

This option displays the named page setup for the sheet. You can change the page setup by clicking the page setup name and selecting another page setup from the list. Only Model tab page setups can be applied to Model tab sheets, and only paper space page setups can be applied to paper space layouts. Select Import to import page setups from another DWG file through the Import Page Setups for Publishing dialog box. You have the option to set the page setup for model space sheets to 3D DWF or 3D DWFx. The 3D DWF option is not available for layout entries in the sheet list.

If you choose to import page setups, it is best to have a specified DWG file as your template. Using an actual sheet from your drawing set as the template can result in corruption.

Status

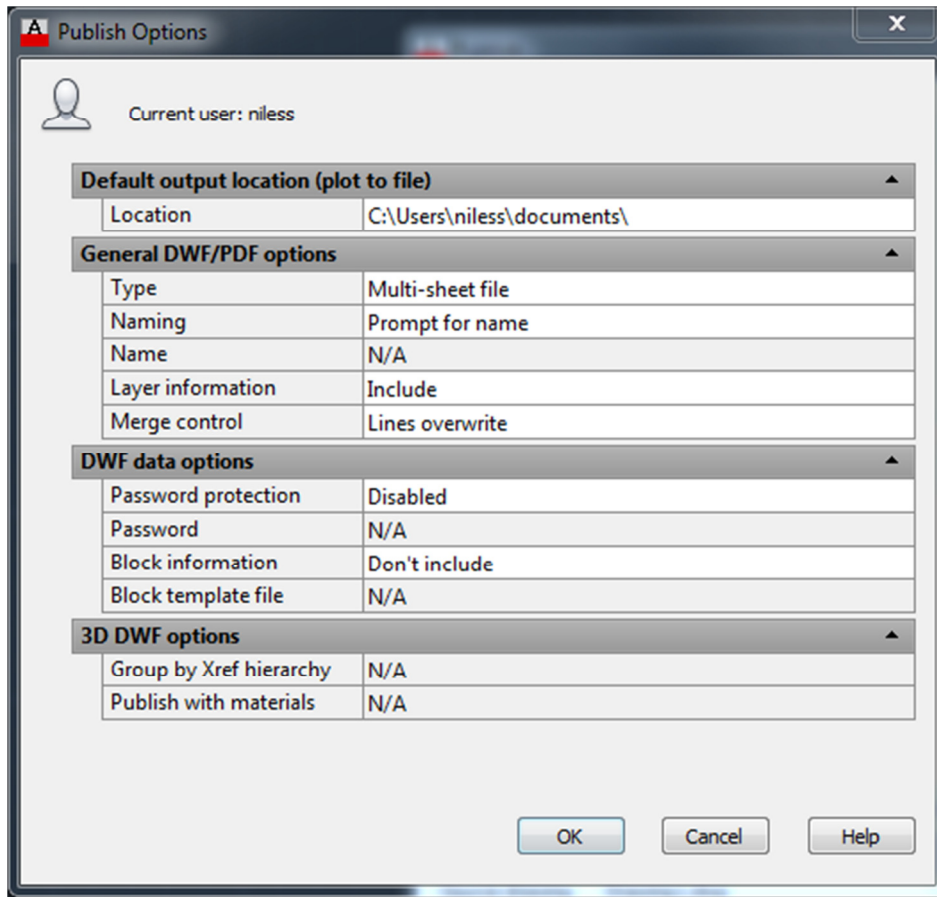
This will display the status of the sheet when it is loaded to the list of sheets.

Selected Sheet Details

This section displays the following information about the selected page setup: plot device, plot size, plot scale, and details.

Publish Options Information

This button opens the Publish Options dialog box. Specifically, you can choose general options for the published DWF, DWFx, or PDF file such as the file name, the save location, and layer information. Before you can publish a multi-sheet DWF, DWFx, or PDF file, you must set the 'Publish To' drop-down box to one of these three formats. The option is located in the upper-left corner of the Publish dialog box.



Default Output Location (Plot to File) (Publish Options Dialog)

Specifies the output folder location where DWF, DWFx, PDF, and plot files are saved when you publish drawing sheets.

General DWF/PDF Options (Publish Options Dialog)

Type

Option will specify whether a single-sheet DWF, DWFx, or PDF file or a single multi-sheet DWF, DWFx, or PDF file is generated for the sheets listed in the Publish Dialog Box.

Naming

- *Prompt for Name* - Displays a standard file selection dialog box for specifying the path and filename of the multi-sheet DWF, DWFx, or PDF file.
- *Specify Name* - Unlocks the Name field immediately below, in which you can enter a filename for the multi-sheet DWF, DWFx, or PDF file.

Name

Enter a name here for the DWF, DWFx or PDF file. To unlock the Name field, the Naming field above must be set to the Specify Name option.

Layer Information

This option specifies whether layer information is included in the published DWF, DWFx or PDF file. Layer information for 3D DWF or 3D DWFx entries does not get published.

Merge Control

Specifies whether overlapping lines merge (the colors of the lines blend together into a third color) or overwrite (the last plotted line obscures the line beneath it).

DWF Data Options (Publish Options Dialog)

These fields list and enable you to specify the data that you can optionally include in the DWF or DWFx file.

Password Protection

Specifies the following options for protecting DWF or DWFx files with passwords:

- *Disabled* - Specifies that no password is required.
- *Prompt for Password* - Displays the DWF Password Dialog Box when you click Publish.
- *Specify Password* - Specifies that the password in the password box is applied to the DWF or DWFx file. When you select this option, the Password box becomes available, and you must enter a password.
- **Note:** If you lose or forget the password, it cannot be recovered. Keep a list of passwords and their corresponding DWF or DWFx file names in a safe place.

Password

This field specifies that published DWF or DWFx files have a password applied to them. A recipient of a DWF or DWFx file that has a password applied to it must have the password to open the DWF or DWFx file.

Block Information

This field specifies whether block property and attribute information is included in the published DWF or DWFx files. You must set block information to Include in order for block template file information to be available.

Block Template File

This field provides options for creating a new block template (DXE) file, editing an existing block template file, or using the settings of a previously created block template file. Create opens the Publish Block Template dialog box, in which you can create a new block template. Edit opens the Select Block Template dialog box, in which you can select an existing block template to modify. It is important to note that when only 3D DWF or 3D DWFx files are queued for publishing, Block Information and Block Template File are set to N/A and cannot be changed.

3D DWF Options (Publish Options Dialog)

Keep in mind that 3D DWF options are not available in AutoCAD LT.

Group By XREF Hierarchy

This field will arrange objects by xref hierarchy in the viewer. If set to No, xrefs are listed in the viewer like any other objects. Default = No.

Publish With Materials

Most materials you have assigned to your model will be published to the 3D DWF or 3D DWFx file. If your material contains texture mapping, only the Diffuse Map is published along with its scale and orientation data. Default = Yes.

Note: When only 2D DWF files are queued for publishing, all of the 3D DWF Options are set to N/A and cannot be changed.

Publish Output**Number of Copies**

This specifies the number of copies to publish. If the Publish to DWF, DWFx, or PDF option is selected, the Number of Copies setting defaults to 1 and cannot be changed. If a sheet's page setup specifies to plot to file, then the number set in this option is ignored and a single plot file is created.

Precision

These settings optimize the dpi of DWF, DWFx, and PDF files for your field: manufacturing, architecture or civil engineering. Or you can configure a custom precision preset in the Precision Presets Manager. This setting overrides the dpi setting in the .PC3 driver. This option is grayed out if no file type is selected in the Publish to: drop-down list.

Include Plot Stamp

Places a plot stamp on a specified corner of each drawing and logs it to a file. The plot stamp data is specified in the Plot Stamp Dialog Box. While this check box remains active for sheets that are set for 3D DWF publishing, no plot stamp is added to 3D DWF or 3D DWFx files even if the check box is checked. (Not applicable to AutoCAD LT)

Publish in Background

Toggles background publishing for the selected sheet/s. You can also set the background publishing in the Plot and Publish tab (Tools menu > Options). Select the Publishing checkbox in the Background processing options group. Use this option if you plan to continue working in AutoCAD while the sheets are publishing. You will notice an icon in the system tray where you can track your progress. You may notice AutoCAD slow down while the Publish is taking place.

Send the Sheets to the Plotter in Reverse Order button

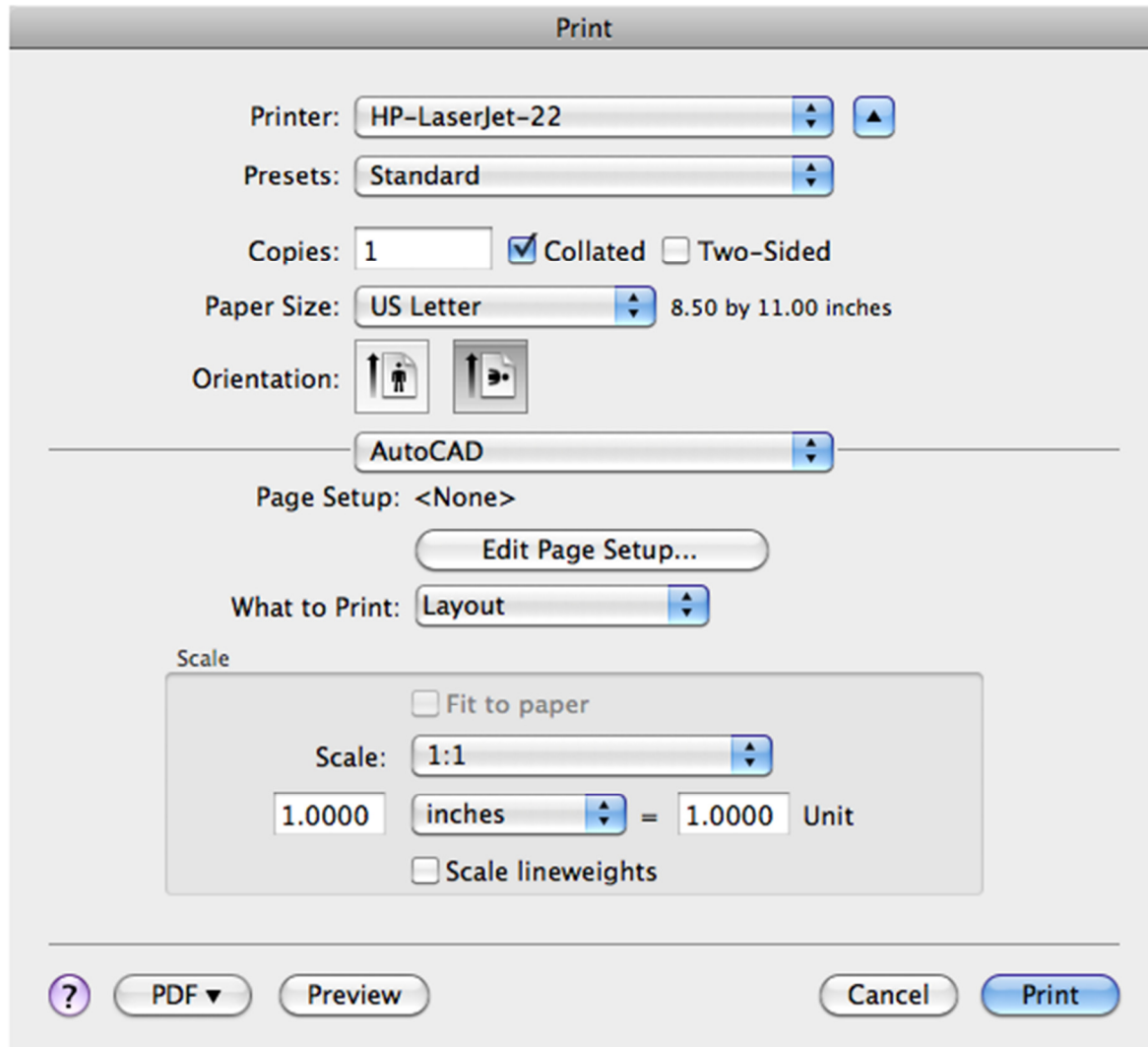
When selected, sends sheets to the plotter in reverse of default order. This option is available only if the Plotter Named in Page Setup option is selected.

Open in Viewer when Done

When publishing completes, the DWF, DWFx or PDF file will open in a viewer application.

Section 5: Plotting on a MAC

The following dialog box is displayed when activating the PLOT command:



You can display more options by clicking the Arrow button to the right of the Printer drop-down list. Printing allows you to output a single layout at a time. If you want to print more than one layout at a time, use the PUBLISH command.

Printer

This option specifies an output device to use when printing layouts. If the selected output device does not support the layout's selected paper size, a warning is displayed and you can select the device's default paper size or a custom paper size. Click the disclosure triangle to the right of the Printer drop-down list to expand the Print dialog box. When the dialog box is expanded, additional settings are available that allow you to control the printing of the layout.

Presets

This option specifies the named print preset to use for printing the current layout. Print presets store the following information:

- Number of Copies
- Collated
- Two-sided
- Paper size
- Orientation

PDF

This field lists options for printing to an electronic file. Some of the available options allow you to create PDF and PostScript files.

Preview

Displays the drawing as it will appear when printed on paper (PREVIEW command). Exit the print preview and return to the Print dialog box to complete the print.

The following links provide additional information with regards to plotting with AutoCAD for MAC:

YouTube video with steps for saving to PDF:

http://www.youtube.com/watch?v=OhLxkKaNFp0&list=PL198958F3F5965CC6&index=9&feature=plpp_video

Additional options available when using the –PLOT command:

<http://docs.autodesk.com/ACDMAC/2013/ENU/filesACRMac/GUID-625E395D-143A-494F-A1EA-1BF119B927DC.htm#WSC30CD3D5FAA8F6D81BCA5F1FFC2D6150D-7F9C>

Publish options for AutoCAD for MAC:

<http://docs.autodesk.com/ACDMAC/2013/ENU/filesACRMac/GUID-0D1DB83F-F1A3-4D22-8FBC-342B2E93172C.htm>

Alternatively, click on the question mark on the plot dialog box. This will bring you directly to the AutoCAD for MAC plotting help page. This page walks through each individual option on the plot dialog page, and goes over some of the troubleshooting steps that may be needed.

Section 6: Tips

- 1) Don't create a PDF from a DWF, or vice versa. Always try to eliminate the extra levels of file creation if possible. Create any files you need directly from the DWG.
- 2) Educational Plot Stamp. If you see the warning when opening a file, do not continue. Let the person who sent the file to you know that you need a new file not created with the educational version.
 - a. <http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=17886605&linkID=9240617>
- 3) Alternate drivers can be used to create PDF files if you have trouble with the DWG to PDF.pc3 file. One suggestion is www.cutepdf.com.
- 4) If you will be sharing PC3/PMP files between machines, make sure the machines have the same version of Windows, AutoCAD, and print drivers. Otherwise you may experience an issue where the PC3 is not recognized. It is always best to create new PC3 files when upgrading to a new version of AutoCAD.

Section 7: Common Issues

- 1) When I publish my sheets, not all sheets will print out. Why?
 - Try recreating the DST file if you plotted from one. If the DST is old, or if some of the DWG's contained in it have moved, the publish job may stall.
 - If you have a separate template file set up to store your Page Setups, this may need to be recreated. Test sending the publish job again without pulling from the template file. If it works, you will know this is the issue.
 - Try publishing to a different printer/plotter to see if the sheets complete. It may be a problem with the drivers for the plotter that did not complete.
 - Try plotting a smaller set of sheets to see if it will complete. If you are bumping up against system resources, you may need to plot in smaller sets in order to complete all the sheets.
- 2) When I send my file to the plotter, AutoCAD gives an error that it cannot be plotted. Why?
 - Try sending a different file to the same plotter. If this one plots out, there may be a problem with the first file. If it is a DWG, run the commands AUDIT and PURGE to clean the DWG, then try plotting again. If a DWF, PDF, ect., then clean the DWG the file was created from, and recreate it. Then send to the plotter again.
 - If other sheets also do not plot out to this particular printer/plotter, then the problem is likely with that plotter and not any particular files. Test to see if you have the most up to date drivers for that plotter. Test other sizes to that plotter to see if there is just a problem with one size. Test to see if other file formats can be sent to that plotter. Likely one of these things will be the cause. If these fail, remove the plotter and any associated PC3/PMP files, and reinstall/rebuild from scratch.
 - Check to make sure that the latest plot driver is installed.

- If there are a lot of hatches in the file, consider putting some of those on a frozen layer before plotting. Hatching will take up a lot of system resources and can cause a crash. Plot only the hatching you need to see.

- 3) In the Plot Style Table section of the plot dialog box, it tells me the CTB/STB file is missing. How do I find it?

More than likely, you received this particular DWG file from a client/customer. Since DWG's will often remember the last settings they were printed with, if your client/customer did not also send you the CTB/STB, you will see this message that it is missing. Since these files are not private, and it is in the interest of having files look the same across all offices, most people have no problem sharing these files. Simply request the missing CTB/STB file from the folks who sent you the DWG. Type PLOTTERMANAGER at the AutoCAD command line, then click on the folder called 'Plot Styles'. Copy the missing files into this folder, restart AutoCAD, and you will now find that the file is found in the plot dialog box.

- 4) My plot comes out, but some information is missing. Why?
- Your plot could be exceeding the plot memory. This could be on the machine or on the plot device itself. Check to make sure you have enough memory on both.
 - You may not have the latest driver installed. If not, go to the plotter manufacturer's website and download the latest driver. Once this is installed, you may find that all the information plots correctly.
 - Does your plotter have enough ink in it? Check this if it is an ink driven device.
 - Are all layers turned on that you want to print? Are any of them set to a non-plot layer? Adjust this if necessary.
- 5) My plot comes out, but it is clipped so that the entire sheet does not come out. Why is this?
- Make sure that the latest driver is installed.
 - Is the selected paper size the correct one, and one that the plotter/printer is set up to print to?
 - Is there a correct size roll of paper in the device you are plotting to?
 - Try modifying the margins of the sheet so that they are all set to 0.
 - Is the correct scale set for the sheet you are sending?
 - Check the TARGET variable and make sure it is set to 0,0,0.
- 6) I'm trying to select a CTB file to plot with, but I only see STB files in the dropdown. Why can't I see the CTB files?

If the drawing was created in a way that the Named Plot Style (STB) was used, then you will see only these file types in the dropdown list. Use the command CONVERTPSTYLES in order to convert the DWG to the type of file that will look for Color Dependent files (CTB). Once you click OK to the box that appears, you will then see the CTB files instead.

- 7) I have images in my file, but they will not plot out. Why not?
- This will often be caused by a lack of memory resources. If you are spooling your files, try sending direct to the plotter without spooling.
 - Check the two variables called RASTERPERCENT and RASTERTHRESHOLD. RASTERPERCENT sets the maximum percentage of available virtual memory that is

allowed for plotting a raster image. Set this to 90. RASTERTHRESHOLD specifies a raster threshold in megabytes. If the plotted raster image exceeds this threshold, the availability of system memory is checked. The plot is aborted if the image is too big for the available memory. Set this to 90 as well. Setting these options will increase the amount of system resources you are allowing AutoCAD to use.

Section 8: Common Questions

1) What is the difference between a CTB and an STB file?

- *Color-dependent plot style tables* (CTB) use an object's color to determine characteristics such as lineweight. Every red object in a drawing is plotted the same way. While you can edit plot styles in a color-dependent plot style table, you cannot add or delete plot styles. There are 256 plot styles in a color-dependent plot style table, one for each color. CTB's are considered ideal when working among a large team as it is easier to coordinate and make sure everyone plots files with the same look.
- *Named plot style tables* (STB) contain user-defined plot styles. When you use a named plot style table, objects that have the same color may be plotted differently, based on the plot style assigned to the object. A named plot style table can contain as many or as few plot styles as required. Named plot styles can be assigned to objects or layers, just like any other property.
- This blog post discusses further the advantages/ disadvantages to both:
<http://www.caddmanager.com/CMB/2009/08/cad-standards-ctb-vs-stb/>

2) When should I use Design Review or DWG TrueView?

Both products are free on www.Autodesk.com. Simply put, Design Review is better suited for opening and working with DWF and DWFx files, while TrueView should be used when opening DWG files. Both can be used in the event where only viewing or minor editing is needed by the person who will be opening files.

- Design Review** offers a way to open, view, and work with 3D and 2D DWG/DWF files. ADR will actually convert the DWG into a DWF behind the scenes in order to open it, making TrueView the preferred program to open DWG's. If you want to open DXF files in ADR, you will also need TrueView installed. Adobe PDF files can be opened and viewed using ADR, as well as several image type files, including but not limited to JPG, BMP, GIF, and PNG.
- DWG TrueView** allows a way to open DWG files in their native format. Because it is built on the same viewing engine as AutoCAD, TrueView lets you view DWG and DXF files just as you would in that program. You can also print to PDF directly from TrueView without first having to convert to the DWF format.

3) How do I change the margin sizes on printed sheets?

This can be changed in the PC3 file before sending the plot. You can change the margin size per each sheet size. After choosing your desired plot device, click on Properties. Select the 'Modify Standard Paper Sizes' option. Select the page size you would like to change the margins on, and select Modify. You will now see options for the Top, Bottom, Left, and Right margins.

4) What is the difference between a DWF and DWFx file?

DWFx files can be opened and viewed without Design Review, while DWF files cannot. DWFx will be the dominant format for DWF files in the future. DWFx is based upon XML Paper Specification (XPS) format from Microsoft. DWFx files are easily distributable on the Windows Vista/7 platforms. XP users will need to download a driver in order to view DWFx files. Essentially then, Design Review can open DWF and DWFx files seamlessly, but only DWFx files can be opened in Windows without the presence of Design Review.

http://dwf.blogs.com/beyond_the_paper/2010/02/what-is-dwf-versus-dwfx.html