

Tutorial: Getting Started - Drawing Setup

1

Products: AutoCAD 2011 for Mac or later

Audience: New users

Prerequisites: None

Time to complete: 15 minutes

Download the Tutorial File

Before beginning the lessons, download the tutorial.

- Download *getting_started_drawing_setup_acdmac.zip* from <http://www.autodesk.com/autocadformac-tutorials>.

In This Tutorial

In this tutorial, you learn how to do the following:

- Use a drawing template
- Switch tool sets and work with the status bar
- Define and format the drawing units
- Set the plot scale
- Understand model space and paper space

NOTE For more information on the topics covered in this tutorial, see the product User's Guide.

Lesson: Use a Drawing Template

In this lesson, you learn how to start a drawing using a drawing template file.

When you create a new drawing using a template file, the drawing inherits the template's settings. This saves you setup time and helps ensure that each drawing you create follows your company's CAD standards.

Drawing template files have a .dwt file extension.

Some of the settings stored in drawing template files include

- Unit type and scale (precision)
- Title blocks/borders, blocks, and logos
- Layer names
- Snap, grid, and ortho settings
- Grid limits
- Annotation styles
- Linetypes

To start a drawing with a template

- 1 In the Mac OS Dock, click AutoCAD.

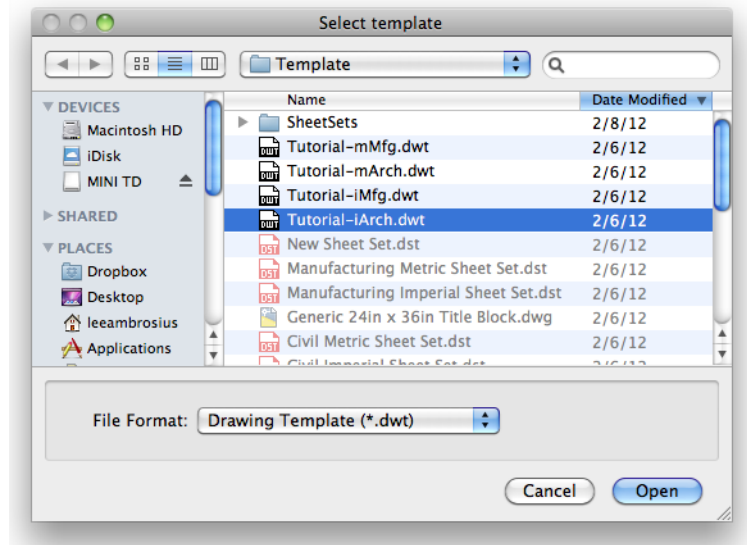
NOTE Close the Welcome Screen, if displayed.

A new an empty drawing file titled named *Drawing1.dwg* is opened.

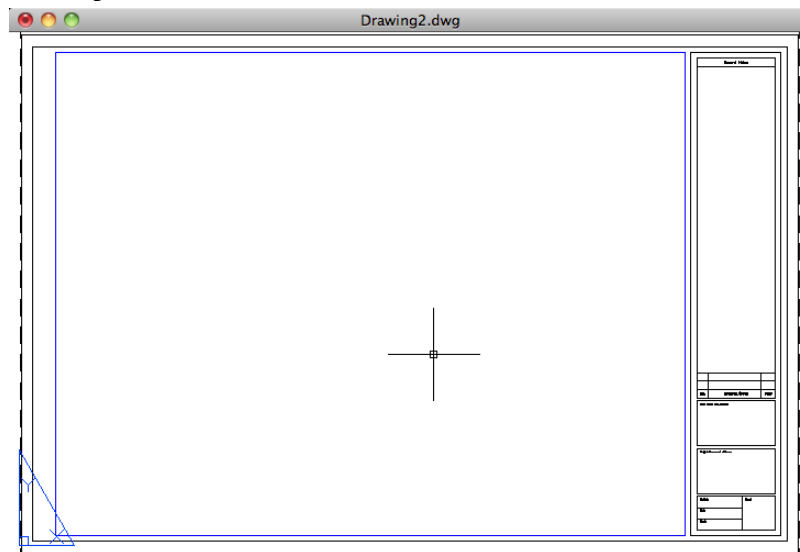
- 2 On the menu bar, click File menu ► New.

TIP You can also right-click the AutoCAD icon in the Dock, and choose New Drawing.

- 3 In the Select Template dialog box, select *Tutorial-iArch.dwt*.



- 4 Click Open.



Notice that the file name is *Drawing2.dwg*. You are not opening the *Tutorial-iArch.dwt* file, but are creating a new drawing based on the template file.

The *Tutorial-iArch.dwt* template file is used for architectural drawings, and includes predefined settings for drawing units, dimension styles, linetypes, layers, borders and title blocks.

When you use a template file, you can start your drawing immediately without having to spend time defining settings and styles.

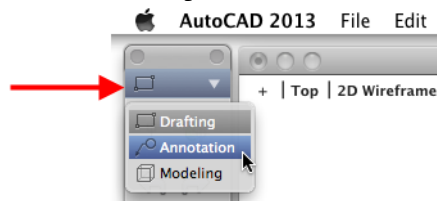
- 5 On the menu bar, click File menu ➤ Close to close *Drawing2.dwg*.

Lesson: Switch Tool Sets and Work with the Status Bar

Tool sets are a way to organize and group similar tools. You can select a predefined tool set or define your own. In this lesson, you learn how to select a predefined tool set that contains tools for creating and editing annotation.

To switch tool sets

- 1 By default, the Tool Sets palette is located along the left side of the screen. If the Tool Sets palette is not displayed, on the menu bar, click Tools menu ➤ Palettes ➤ Tool Sets (or press Cmd-1).
- 2 On the Tool Sets palette, click the Tool Set button and click Annotation.



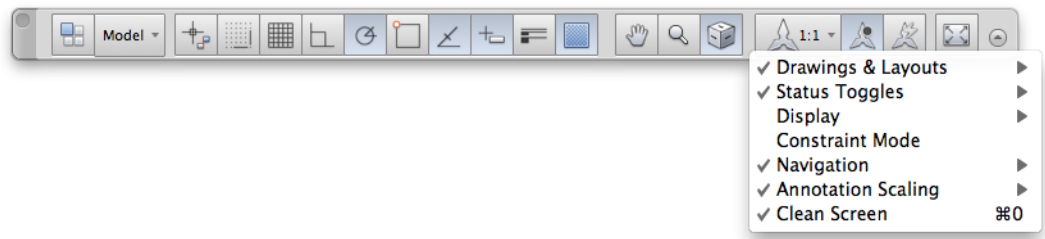
The Drafting tool set contains common tools for creating and editing 2D objects, while the Modeling tool set contains tools for creating and editing 3D objects.

To work with drafting aids on the status bar

The status bar contains many commonly used drafting aids that can be toggled on or off as you create objects. Along with toggling drafting aids on and off at the status bar, you can also control how a drafting aid works and which drafting aids are displayed.

Do one of the following to work with the controls on the status bar:

- Click one of the controls to toggle the drafting setting or select an option from the pop-up menu that is displayed.
- Right-click a control to display a list of available options. Choose Settings to display the Drafting Settings dialog box.
- Right-click in an empty area on the status bar to choose which controls are displayed.

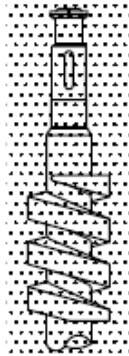


Lesson: Define and Format the Drawing Units

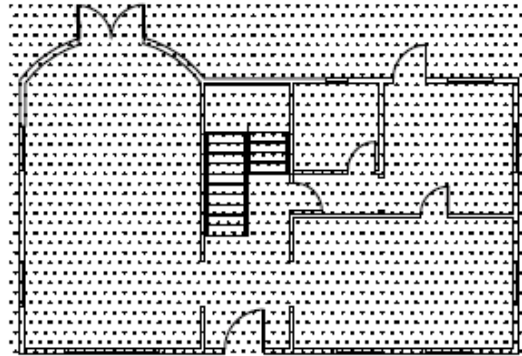
In this lesson, you learn how to define and format the drawing units.

Distances are measured in drawing units. Before you start a drawing, decide what drawing unit represents. For example, one drawing unit may equal one inch, one millimeter, one meter, or one mile.

There is no setting for defining this relationship. A unit is always nothing more than a unit. For example, at any time, you can change your mind about whether you consider a 2-unit line to equal 2 inches or 2 miles.



Shaft
1 unit = 1 mm
(grid spacing = 2 mm)



Office plan
1 unit = 1 inch
(grid spacing = 12 inches)

After you define the drawing units, you can specify a format for the units. The format controls only the display style of the drawing units on screen, such as in the display of coordinates and values in the dialog boxes and prompts.

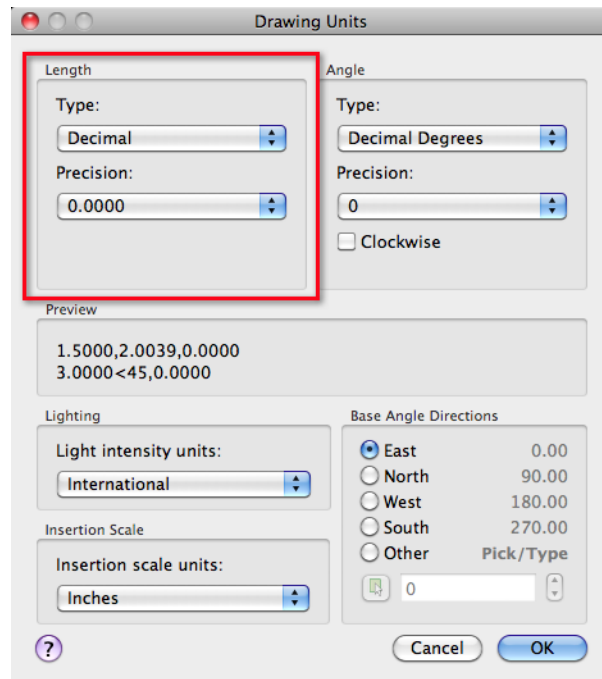
Using a sample length of 15.5 units, the format settings available for linear units include

- **Architectural.** A length of 15.5 units displays as 1'-3 1/2"
- **Decimal.** A length of 15.5 units displays as 15.5000
- **Engineering.** A length of 15.5 units displays as 1'-3.5"
- **Fractional.** A length of 15.5 units displays as 15 1/2
- **Scientific.** A length of 15.5 units displays as 1.5500E+01

For example, a mechanical engineer who works in millimeters would set the format for linear units to Decimal. An architect who works in feet and inches, would set the format to Architectural.

To set the format of the drawing units

- 1 On the menu bar, click Format menu ► Units.
- 2 In the Drawing Units dialog box, under Length, select the following values:
 - Type: **Architectural**
 - Precision: **0'-0 1/8"**



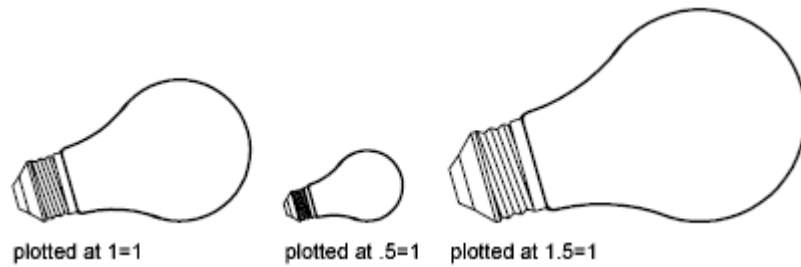
The Preview group shows sample drawing units, displayed using the selected type and precision. Select different types (such as Decimal, Scientific, Fractional, or Engineering) and notice how the display style for the sample changes.

- 3 Click Cancel to close the dialog box.

Lesson: Set the Plot Scale

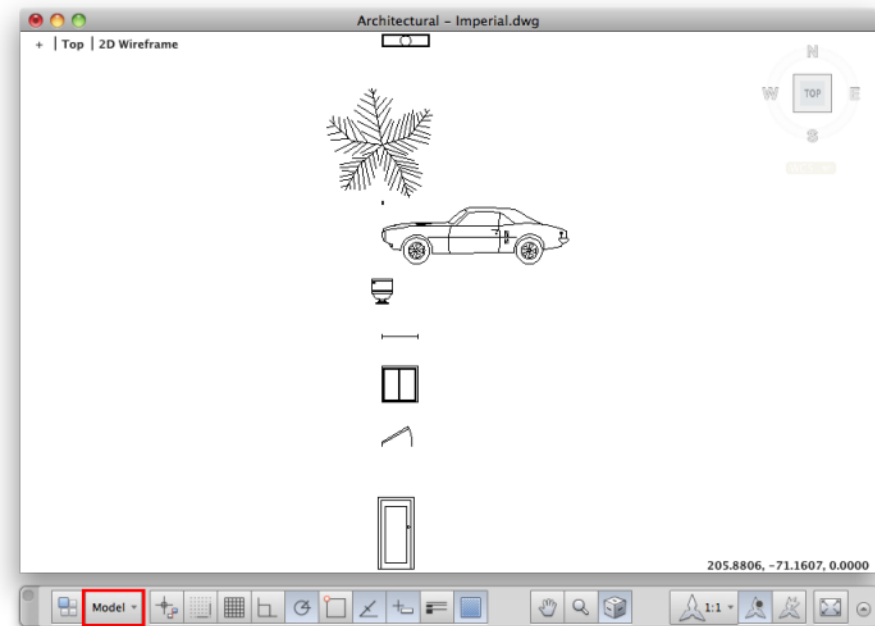
In this lesson, you learn how to specify the scale at which to output your drawing.

When you print a drawing, you either specify a precise scale or fit the drawing to the current paper size.



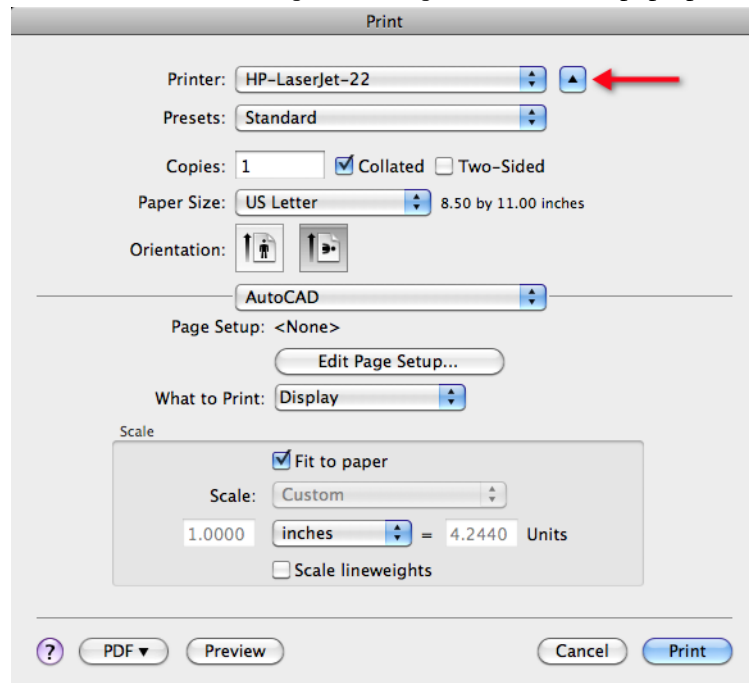
To plot using a custom scale

- 1 On the menu bar, click File menu ► Open.
- 2 In the Open dialog box, browse to and select *Architectural - Imperial.dwg*. Click Open.



- 3 On the status bar, verify that Model is selected from the Model/Layout pop-up menu.
You must be in model space for this lesson.
- 4 On the menu bar, click File menu ► Print.
- 5 In the Printing in Model Space message box, click Continue.

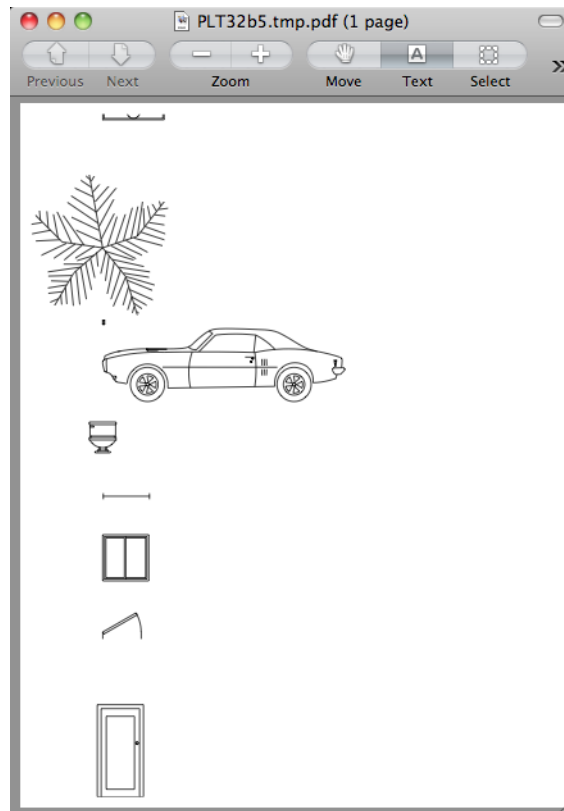
- 6 In the Print dialog box, from the Printer pop-up menu, select the printer you want to use.
- 7 Click the disclosure triangle to the right of the Printer pop-up menu.



- 8 Click Portrait for the Orientation.
- 9 Select Extents from the What to Print pop-up menu.
- 10 Under Scale, select 1:50 from the Scale pop-up menu.

NOTE If the Fit to Paper checkbox is selected, the Scale pop-up menu is not available.

- 11 Click Preview. The preview of the drawing is displayed at the selected scale of 1:50.

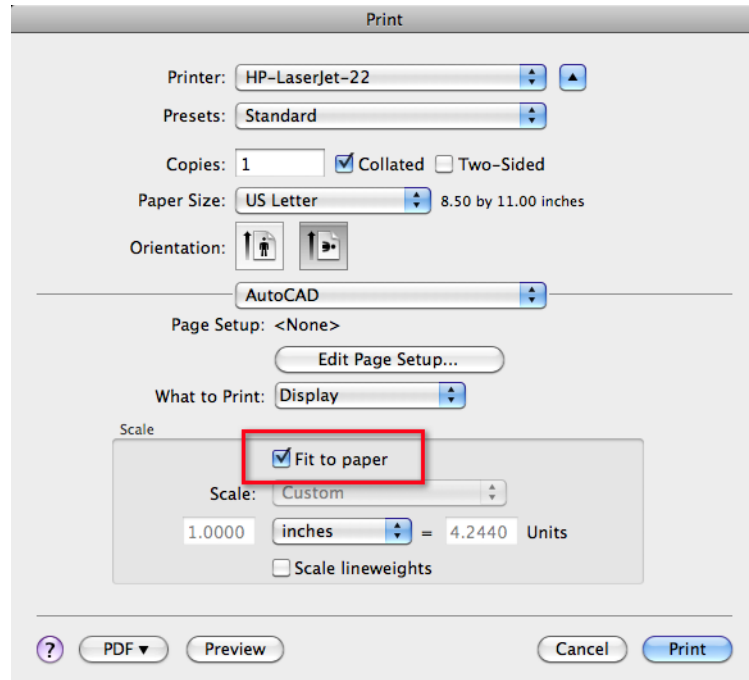


- 12 On the menu bar, click Preview menu ► Quit Preview to return to the Print dialog box.
- 13 In the Print dialog box, click Print or Cancel.

To scale a drawing to fit the plotted page

- 1 On the menu bar, click File menu ► Print.
- 2 In the Printing in Model Space message box, click Continue.
- 3 In the Print dialog box, click the disclosure triangle to the right of the Printers pop-up menu.

- 4 Under Scale, select Fit to Paper.



The resulting scale is automatically calculated. The ratio of printed units to drawing units is displayed in the custom scale settings.

- 5 Click Print or Cancel.

TIP In the Print dialog box, click Preview to preview the drawing before outputting it to the printer or an electronic file.

Lesson: Understand Model Space and Paper Space

In this lesson, you learn some basic concepts about model space and paper space.

There are two distinct working environments (or *spaces*), in which you create objects in a drawing: *model space* and *paper space*.

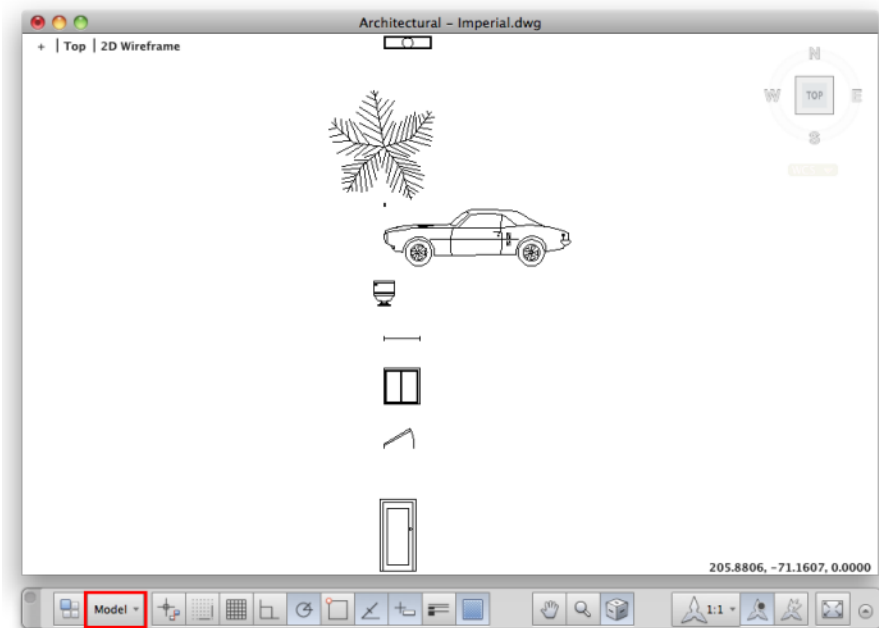
Use the Model/Layout pop-up menu in the status bar to access model space and paper space. Use Model for model space, and use one or more of the layouts for paper space.

In model space, designs are drawn at actual scale. In paper space, model space designs are displayed in *layout viewports*. Each viewport has an assigned scale ratio to control the size at which the design is printed. In paper space, you can add dimensions, notes, and a title block to represent a drawing sheet.

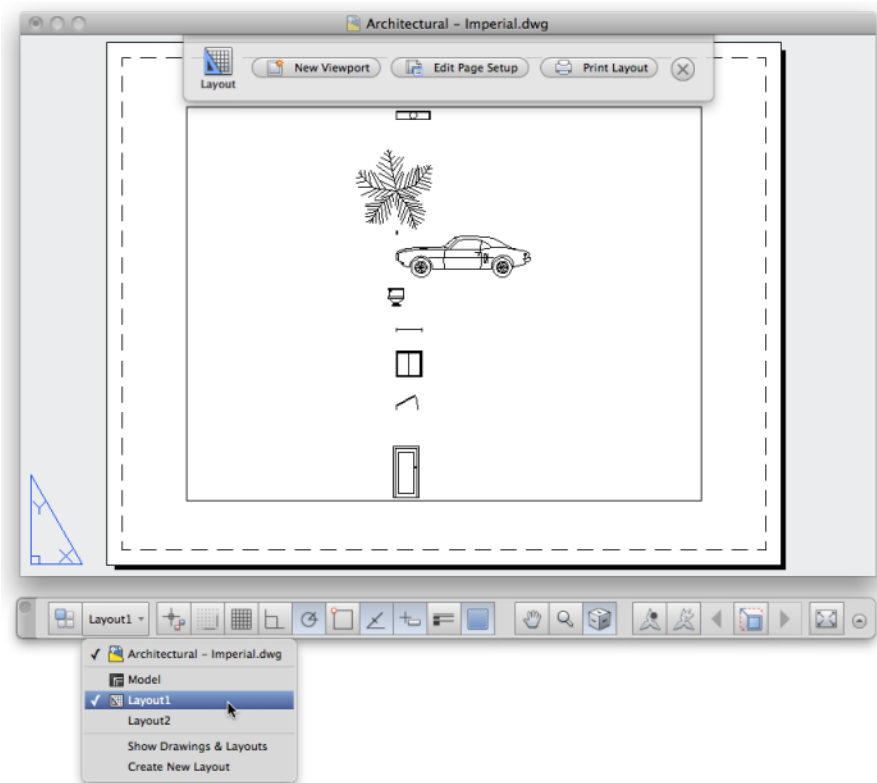
To switch between model space and paper space

- 1 If *Architectural - Imperial.dwg* is not already open, on the menu bar, click File menu ► Open and select *Architectural - Imperial.dwg*. Click Open.
- 2 On the status bar, select Model from the Model/Layout pop-up menu if Model is not already selected.

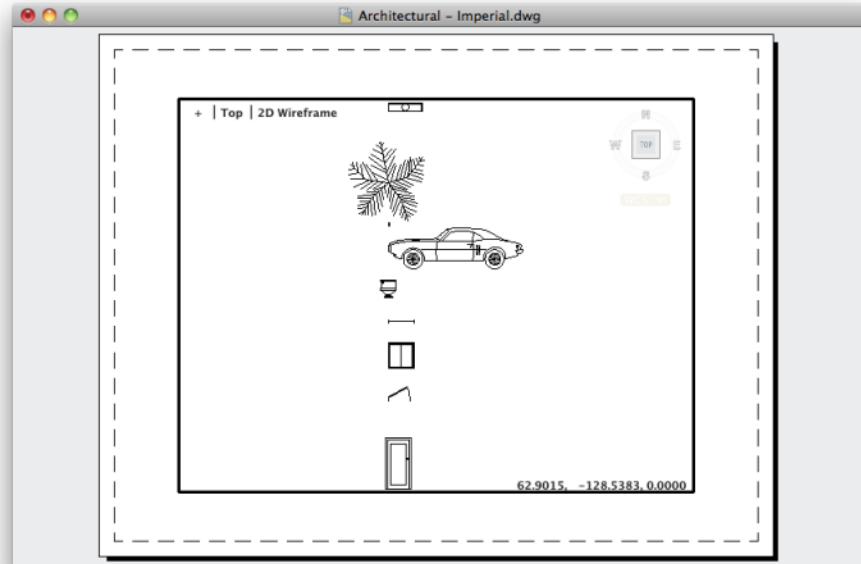
In model space, you draw, view, and edit your design.



- 3 Select Layout1 from the Model/Layout pop-up menu.
A layout containing one rectangular layout viewport is displayed.
From a layout, you can access both paper and model space. When you are in paper space, the paper space UCS icon (shown in blue below) appears in the lower-left corner.
If you are not in paper space, double-click the left mouse button in a blank area outside of the viewport.



- 4 Double-click inside the viewport to enter model space.



Notice that the viewport border becomes thicker and the blue paper space UCS icon disappears. A layout viewport is like a picture frame containing a “photograph” of the drawing in model space.

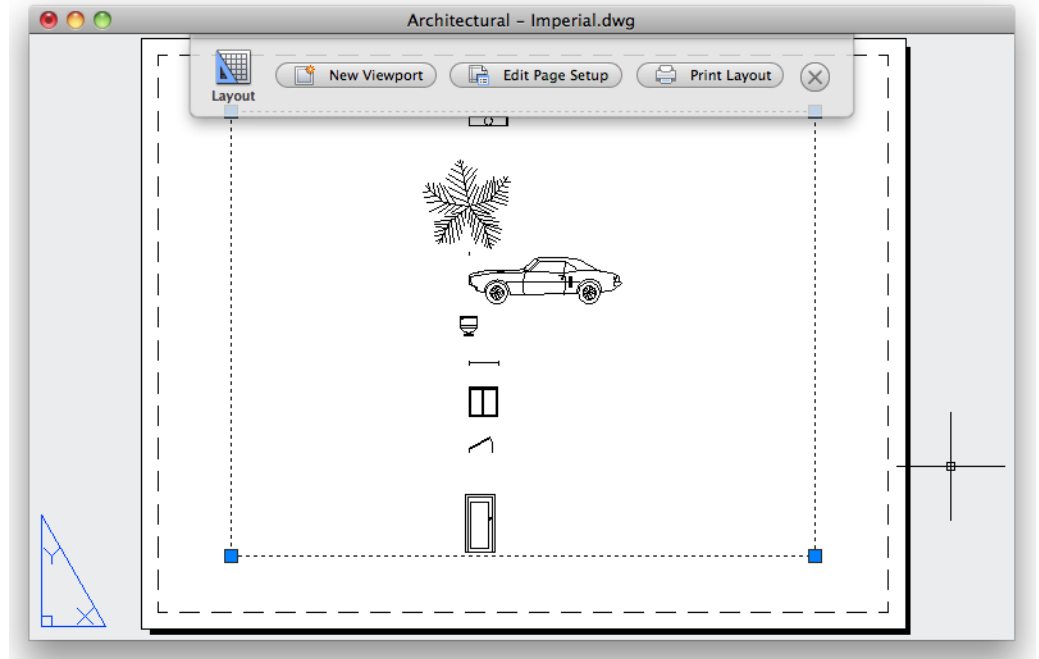
- 5 Double-click outside the viewport in a blank area to return to paper space.

NOTE You can maximize a viewport by double-clicking its border. This expands the viewport so it fills the entire drawing area. Double-click outside of the red dashed border to restore the viewport to its previous shape and size.

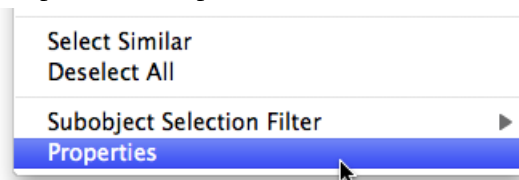
To set a viewport to a specific scale

- 1 Ensure that you have *Architectural - Imperial.dwg* open.
- 2 On the status bar, select Layout 1 from the Model/Layout pop-up menu and ensure that you are in paper space. If model space is active, double-click outside of the viewport.

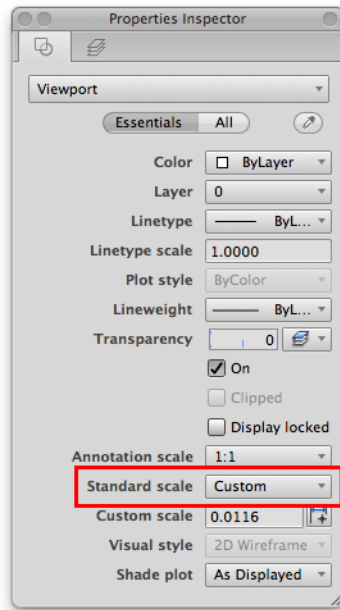
- 3 Click the viewport border to select the viewport.



- 4 In the drawing area, right-click on a mouse or two finger tap on a trackpad. Click Properties.



- 5 In the Properties Inspector, click Standard Scale, and then select **3/8"** = **1'-0"** from the list.



The selected scale is applied to the viewport.

