

## AutoCAD Basics – Assignment 2

This tutorial will show you how to use the following:

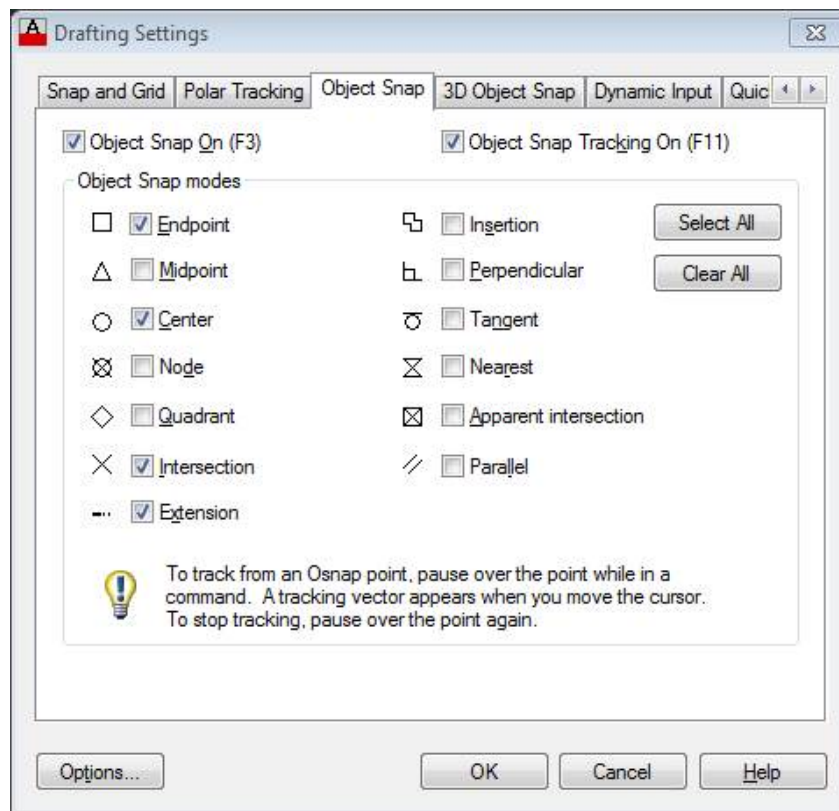
- Using ENTITY SNAPS
- Changing LINE TYPES
- Changing COLOR
- VIEWING
- And PRINTING

You will need to have completed these basics before moving on.

**OPEN "AutoCadBasics1.dwg" and SAVE AS "AutoCadBasics2.dwg"**

## ASSISTS and CHANGES

1. In the COMMAND BAR type “OSNAP”
2. OSNAP allows you to grab SPECIFIC and ACCURATE parts of your object. These are GOOD FRIENDS to get to know



3. For a beginner, GRID and SNAP help you – but when you get used to using ENTITY SNAPS, you will never use SNAP and GRID again. **NOTE:** Sometimes SNAP and OSNAP conflict with each

other. You will find it easier to use ONE or the OTHER, but not both.

4. OSNAP allows you to “snap” to things. These are the ones I use the most:

- a. End Point
- b. Mid Point
- c. Center of circle
- d. Quadrant of circles
- e. Intersection of lines
- f. Perpendicular to a line
- g. Tangent to a circle
- h. Extension, Apparent Intersection, and Parallel, are new to me – I haven’t played with them yet.

## LINE TYPES

5. There are different types of lines used in drawings. Different linetypes add clarity to the reader. You will be using these to start:



6. CENTER lines are used to show the center of a round or cylindrical object

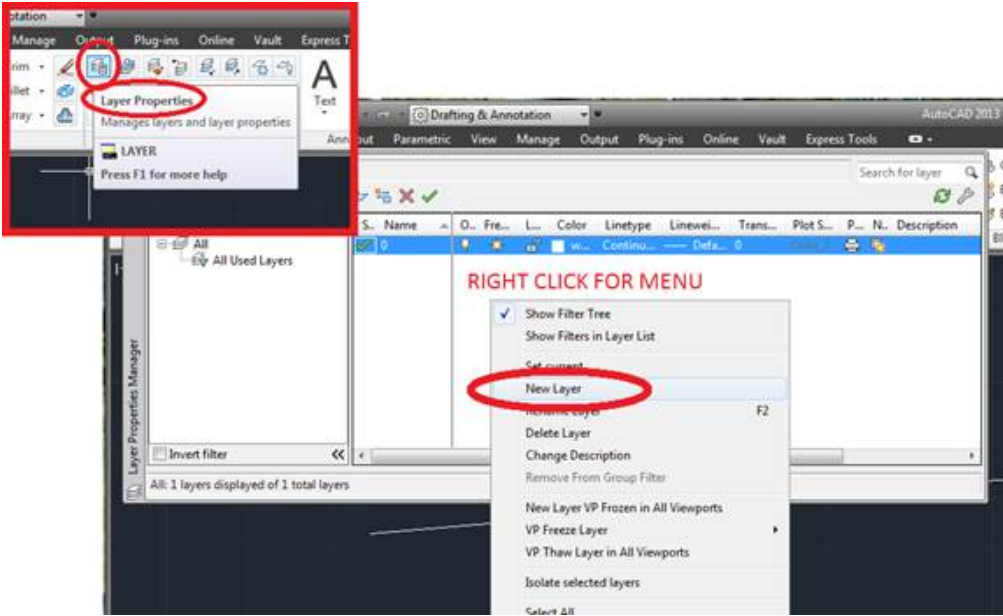
7. HIDDEN lines are used to show edges that exist, but cannot be seen in the normal view

**NOTE:** Different drawings may require the line types to be scaled up or down to suit the drawing (otherwise hidden lines will still look continuous). Change the Line Type Scale for this drawing by typing **LTSCALE** and changing the setting to about **15**.

## LAYERS

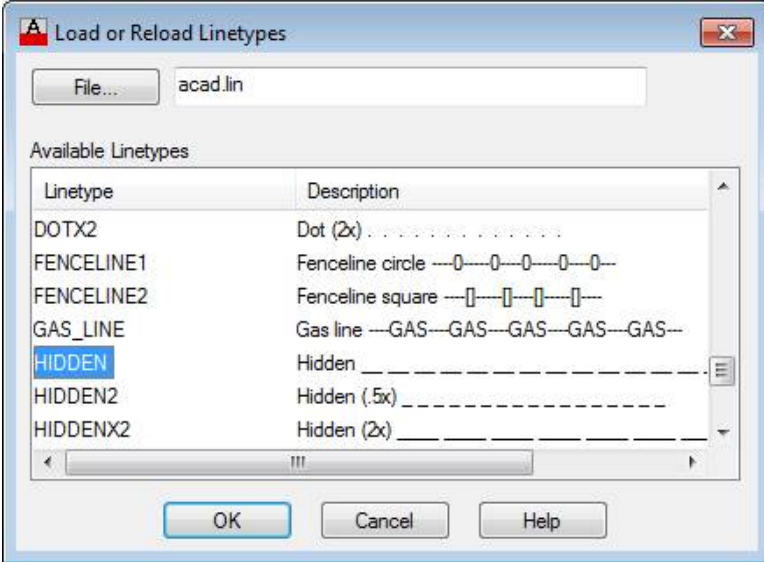
1. Layers are like pictures of the human body you would see in an encyclopedia, where the skin was on one transparent page, the muscles on another, the bones on another, the organs on another. Stack them all together and you have the whole body, or pull just one out to look at that information. These are “layers” of drawings.
2. Layers allow you to change line types (continuous, center, hidden, etc.), line colours, and other settings quickly and easily. If you set a layer to a certain colour, anything you move to that layer *automatically* becomes the layer colour.
3. In this assignment you will need to draw some HIDDEN LINES. This is easiest if you create a “HIDDEN” layer.

4. First, type LAYER, or click here:

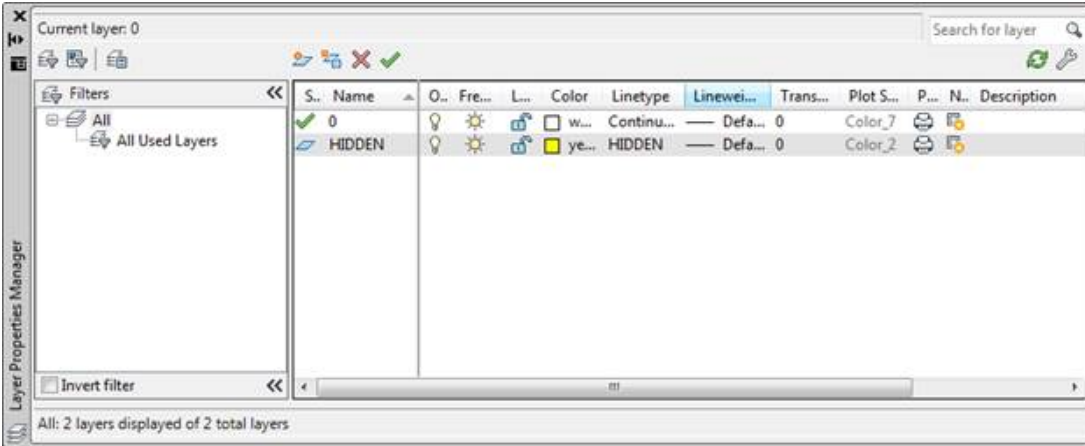


5. CREATE a new layer called “HIDDEN”

6. CLICK on Linetype to CHANGE it to “HIDDEN” (you likely will have to load it)



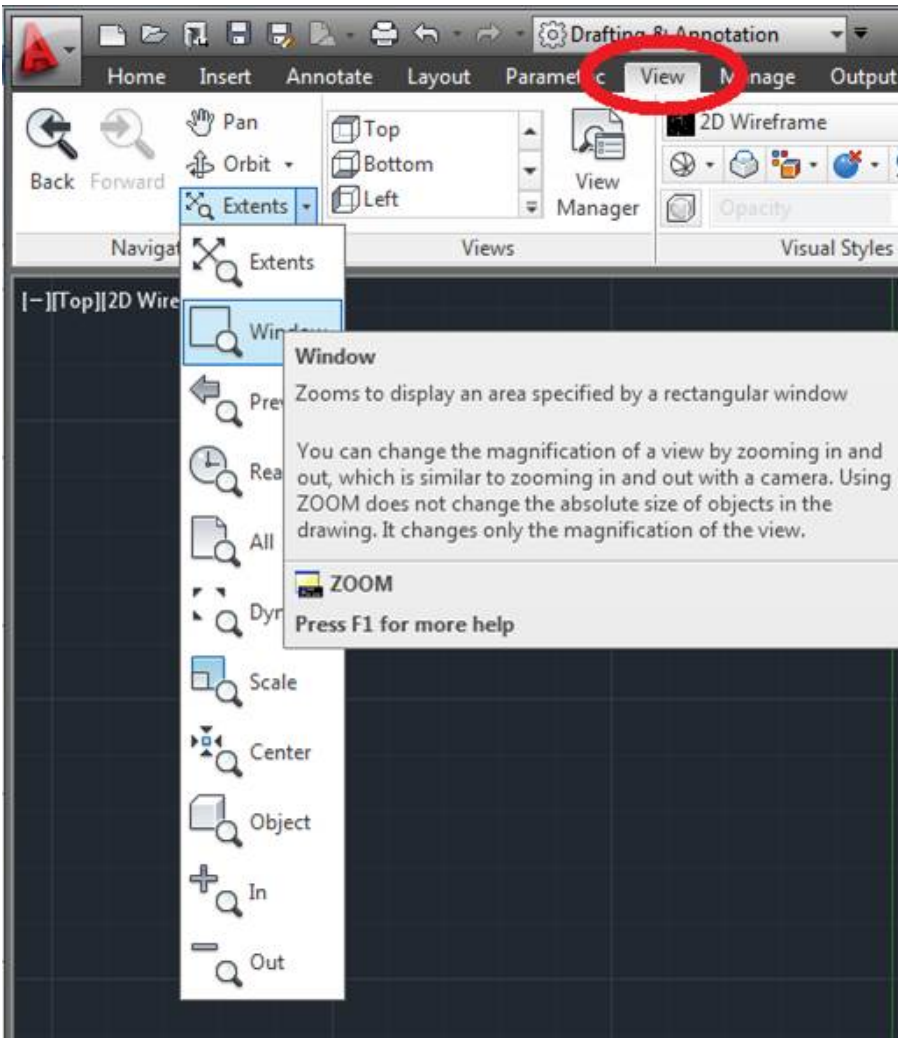
7. CHANGE the Color to Yellow



8. Now anything you DRAW on, or MOVE to this layer, will become a Yellow Hidden line.
9. Notice there is a “0” layer. The “0” layer is really meant for blocks (we’ll learn those later). Nothing should be drawn on the “0” layer, so CREATE an “OBJECT” layer that is a Continuous linetype. *All our objects lines will go on the OBJECT layer.*
10. In fact, create the following layers:
  - a. Object lines: .....Red, continuous
  - b. Hidden lines: .....Yellow, hidden
  - c. Borders and Title Strip: .....White, continuous
  - d. Drawing Text: .....Cyan, continuous
  - e. Center lines: .....Green, center
  - f. Dimension lines and Dimension text: .....Blue, continuous

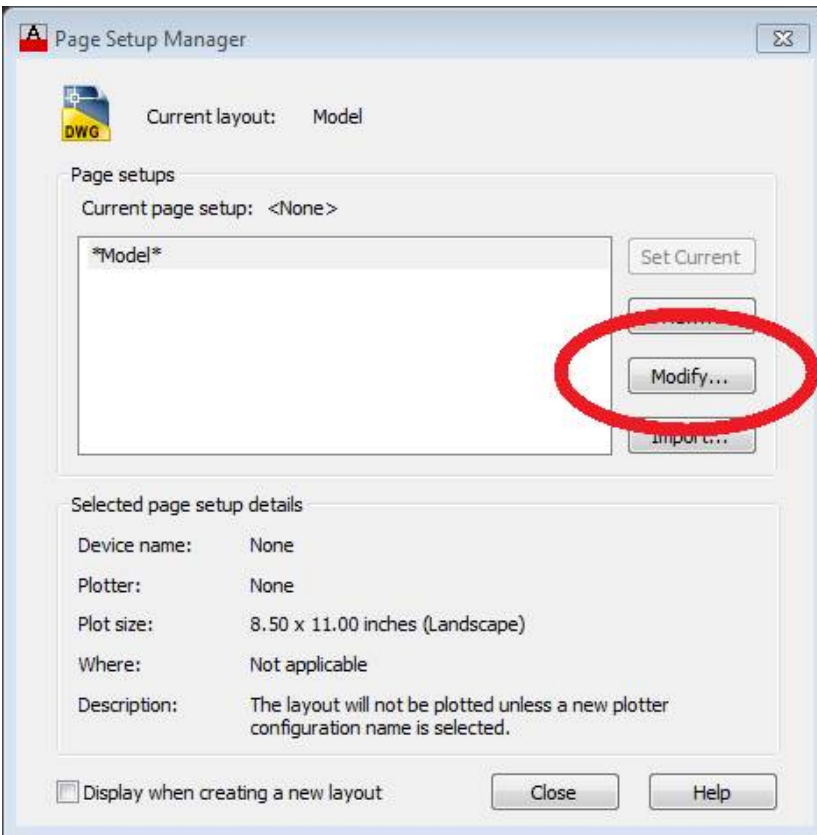
## VIEWING

1. If your picture becomes larger than the screen, or there are details you need to zoom in to, there are some quick VIEW command you need to know:
  - a. DOUBLE-CLICK the mouse wheel – this zooms everything you’ve drawn. Useful for finding things, or getting un-lost in your drawing.
  - b. PAN by holding the mouse wheel down, and moving your mouse.
  - c. ZOOM in and out by scrolling the mouse wheel

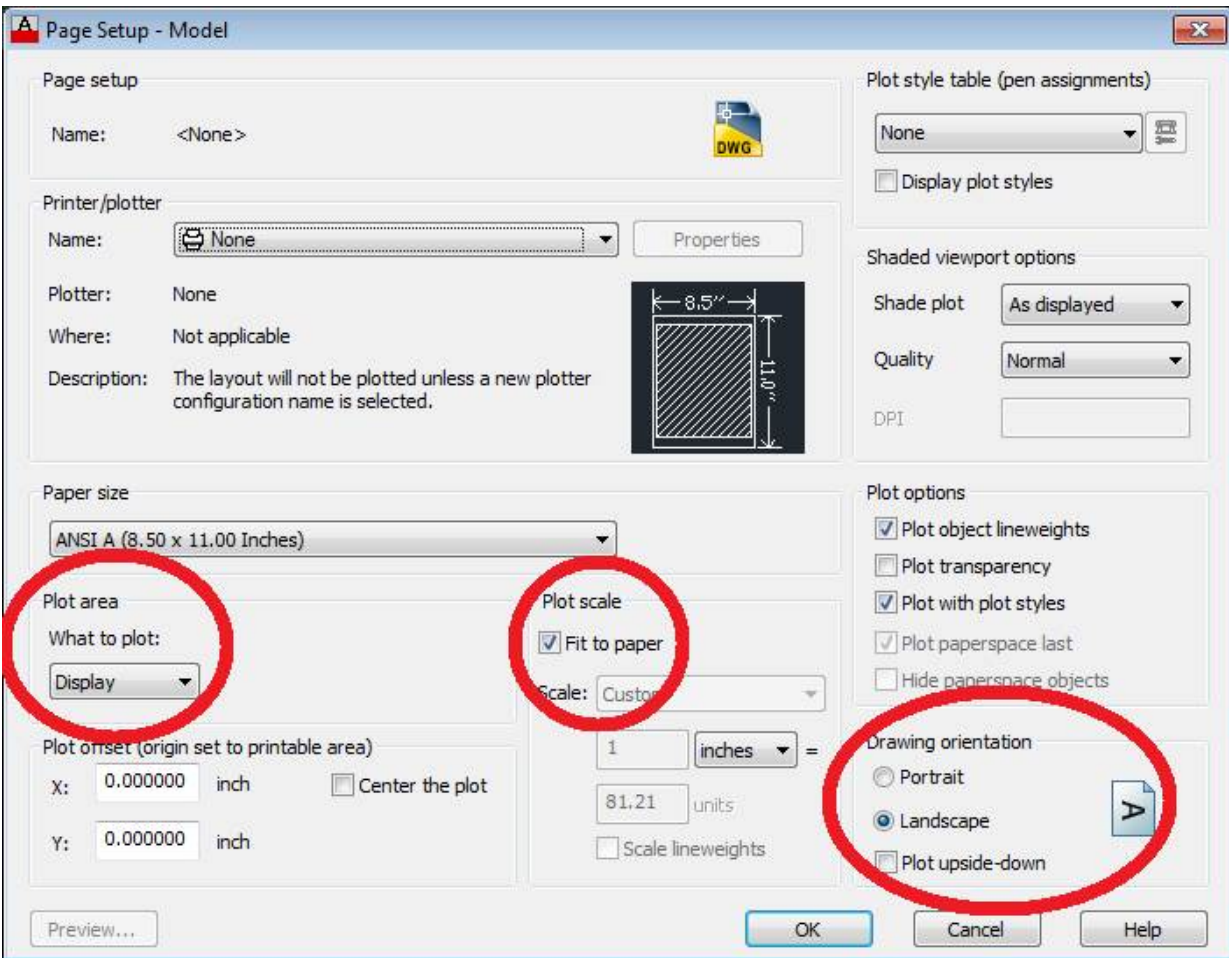


## PRINTING

1. Printing in Drafting is called Plotting.
2. When you print/Plot, perform the following steps:
  - a. Type REGEN to get the best quality image (this is very important)
  - b. Double-Click the mouse wheel to ZOOM ALL
  - c. From the TOP drop-down menus (the big “A”), select PRINT → PAGE SETUP



d. Click MODIFY, which will bring you to this menu:



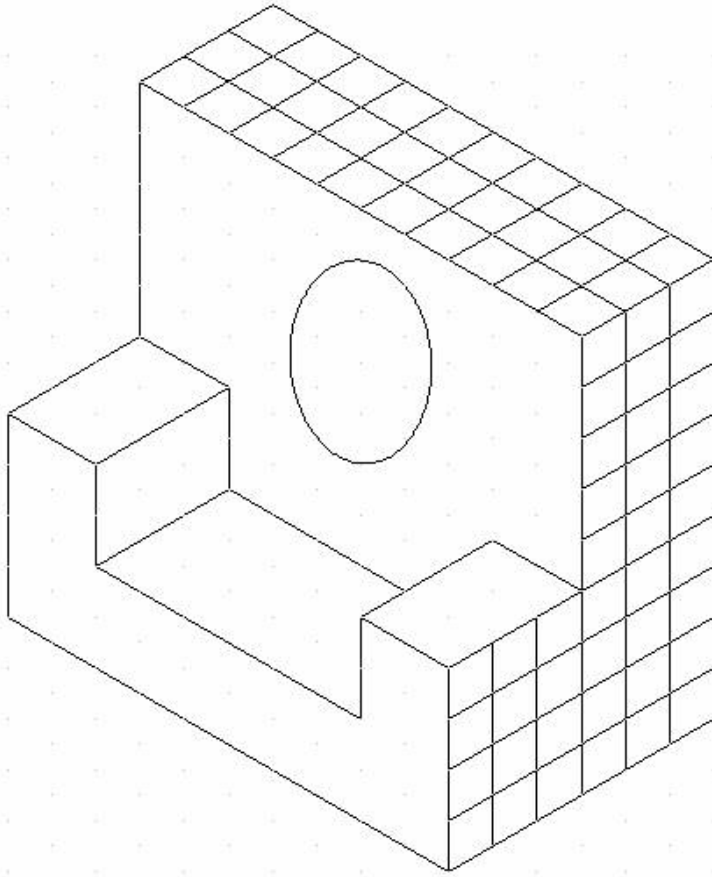
- e. For now, make sure the printer is set to LANDSCAPE, we are going to PLOT TO SCALE, and change PLOT AREA to what it is you want to actually print (I currently use “PLOT TO WINDOW” and draw a crossing box around what I want).

**ALWAYS DO A PRINT PREVIEW!!! I CANNOT STRESS THIS ENOUGH!!!**

## THE ASSIGNMENT

Now try your new found skills to draw the following image as an ORTHOGRAPHIC drawing, complete with appropriate LINE TYPES and COLORS:





***You need to master these skills before you move on. Show your work to your instructor NOW.***

**[Continue on to AutoCAD Basics 3....](#)**