# **Accessing Rhino Page Layouts**

In this exercise, we will use the Page (Sheet) Layout feature to create sheet with Details and title block. The Details will include text and dimensions that are sized correctly for the scale of the Detail. In addition, we will introduce other new features like print width, print color, and the Print dialog are used.

Page (Sheet) Layout is the area that represents the paper in the printer. On the Page Layout you will add title blocks and Details. The Page Layout is typically plotted 1 to 1.

Details are views of the model that can be arranged on the layout. Scales are assigned to the Details. The Details are activated to add text and dimensions. Details+ can be resized with control points and edges set to not print.



1. Load Rhino 4 and open model *window\_details.3dm*.



- 2. From the Tools menu, click Toolbar Layout or type Toolbar.
- 3. From the **Toolbar dialog**, check the **Sheet Layout** toolbar: The **Sheet Layout** toolbar opens.



4. From the **Tools menu**, click Options. Under the **Document Properties** area, click **Units**. From the dialog are on the right, under **Model units** click **Inches**.

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Rhino Render	Units and tolerances			
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From the dialog are on the right, under **Page units** click **Inches**.

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### Adding the Page Layout and Inserting a Title Block

1. Pick the New Layout button or type LAYOUT.



2. Configure the **New Page Layout dialog** with the following:

Name: Window Details Paper Unit: Inches Width: 17 Height: 11 Printer: Any printer that can do 11x17 or None. Detail Count: 0

Ś	New Pa	ge Layout 🛛 🗙
	Name:	Window Details
	-Paper Siz	e
	Width:	17.0 inches 💌
	Height:	11.0 inches
	Deintern	
	Printer:	HP LaserJet 8100 Series PCL 6
	Size:	11x17
		○ Portrait
	Initial De	etail Count: 🕕 💌
		OK Cancel





3. Type **Insert**. From the **Insert dialog**, browse to the location of these training files and pick **Title.dwg**. Click the **Open button**.

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Look <u>i</u> n:	🔁 Layout Exercise 💽 🔇 🎓 🖽 🕶
My Recent Documents Desktop My Documents	Porizontal.dwg     Porizontal.dwg     Schedule 2.dwg     Trype: AutoCAD Drawing     Date Modified: 7/6/2006 2:46 PM     Size: 85.1 KB

4. Insertion Point: 0,0 or move it to center on the page.



#### The title block appears.

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# Adding and Configuring the Details

1. From the **Sheet Layout toolbar**, pick the **Add Detail** button or type **DETAIL** and the select the **Add** option.



Hint: You can also access the Layout and Detail command by right clicking over any viewport tab. Both model viewports and Page Layout viewport access this feature.



2. Pick two diagonal corners that match the location with Viewport 1 below. Next, pick two diagonal corners that match with Viewport 2 below.



3. Activate the Detail on the left by double-clicking. Zoom in on the horizontal section. Activate the Detail on the right by double-clicking. Zoom in on the

vertical section.



4. Next set the scale and lock the zooming on the Detail. Make the Page Layout viewport active, and highlight the edge of the Detail. *Do not double click to activate at the Detail.* 

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	Print Color	By Layer	<b>•</b>
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		Match	
		Details	

- 5. From the **Property dialog**, under the property type list box, select **Detail**.
- 6. Set the scale **inches on page** to **1** and the **inches on model** to **2**. This will automatically convert to .5 and 1, respectively. If the placement looks good, you can check "lock". Or you may prefer to pan the Detail some before returning here later to lock it.

Properties	X
Detail	
✓ Locked	-
Scale 0.5 inches on page	
1.0 inches in model	
	-

7. Do the same for the second viewport

8. To resize or crop the Detail, turn Control Points. You can do this with the **PointsOn** command on the Toolbar or **F10** on the keyboard.



### Adding Text to the Page Layout

- 1. Confirm that the Page Layout viewport is active, not a Detail.From the **Dimension menu**, select **Annotation block**.
- 2. Pick a start point under the first Detail. Set height of .25 and text Horizontal Section (Looking down). Under the second Detail, add the text Vertical Section (looking left).

😽 Create Text	×
Font	
Arial	
Bold	
Always use this font	
Height: 0.25 inches Import File	
Text to create	
Vertical Section (looking Left)	
OK Cancel Help	li
Page 1	
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	C
Horizontal Section (looking down) Scale: 12	
	Vertical Section (looking Left) Scale: 12
	Institution         Institution

3. Insert **Horizontal.dwg** and **Vertical.dwg** next to the text titles. These blocks will indicate the direction the section is viewing.



## Adding Dimensions to the Detail

 To set the Detail edges to not print, assign the Print Width to "no print" in the Properties dialog. Pick or highlight the edge of the Detail, open **Properties**. Under **Print Width** field, select **no print**. You can change both Details to **no print** at the same time.

Properties	×
Object	•
Object type	detail view
Name	
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	0.80
	1.00
	1.20
	1.40
	2.00 No Print

- 2. Next make a **Dimension** layer. Set color to **green** and make it **current**.
- 3. Under the **Dimension menu**, select **Dimension Properties**. Pick the **New** button and name the dimension style **Dim2**.

Document Properties		×
Document Properties     Rhino Render     Mesh     Units     Page Units     Dimensions     Grid     Notes     Summary     Linetypes     Hatch     Web Browser     Rhino Options     Yiew     Aliases     Appearance     Files     General     Mouse	Global dimension scale 1.0 Dimension style - Dimension Style 01 New Bename Delete imension Style Name me Dim2 OK Cancel	
- Keyboard - Plug-ins B Modeling Aids Context Menu		

4. Cascade out the dimension style tree and click **Dim2**. On the right side of the dialog, set the dimension fields to appropriate values. See image below for these settings.

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		Eont Arial - Arial	
		Number format	
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		Sizes Text height: Extension line extension:	0.125         Text gap:         0.1           0.1         Extension line offset:         0.1
		Dimension line extension:	0.0 Centermark size: 0.125
		Dimension arrows	
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Document Properties		Leader arrows	
- Mesh Units	Name: Dim2	Length:	0.125 Arrow
- Page Units	Eont	Text alignment	
E- Dimensions - Dimension Style 01 - Dimension Style 01	Arial - Arial Number format Decimal	<ul> <li>Above dimension line</li> <li>In dimension line</li> <li><u>H</u>orizontal to view</li> </ul>	Advanced
- Notes	C Fractional		
- Summary - Linetypes	C Feet & Inches		OK Cancel Help
Hatch	Sizes	Li.	

Pick main **Dimension** dialog. From the right of the dialog, set the **global scale** to
 This will compensate for the **Detail** being scaled by <sup>1</sup>/<sub>2</sub>. or **1** paper unit per **2** model units. Pick **OK** to return to graphics screen.

S Document Properties	X
Document Properties  Rhino Render Mesh Units Dimensions Dimension Style 01 Dim2 Grid Notes Summary Linetypes Hatch	Global dimension scale 2 Dimension style Dim2 New Rename Delete

6. Because dimensions are more closely related to the model and reflect the size of model geometry; create them in Detail view. With the Detail active, create these linear dimensions in the horizontal view.



7. With the Detail active, create these linear dimensions in the vertical view.



8. Double click on the dimension text and change the value to the suggested text strings below.





### Adding Text to the Detail

1. Add text inside the Detail. Use a text height of .25. Because of the Detail scale is set to ½. the text displays and prints at .125 units in height on sheet layout viewport

Hint: the printed text height is a product of the text height and the scale factor of
the Detail. Fro example
.25in.(text height) x .5(scale of Detail)=.125in.(printed height)

2. You can test this now by comparing the height of the text to the dimension text. Create text on the **Page Layout** that is **.125** and text in the detail that is **.25**. They should display and plot in equal height.

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😽 Create Text			×	
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☐ Bold ☐ Italic ☑ Always use this font		<u>.</u>		
Height: 0.25	inches	Import File		
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3. In the **Print dialog**, instead of **display color** select **black and white**.

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Print Setup		_ 🗆 ×
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Output Color set to Print Color.



Output Color set to Black and White.

## **Configuring Print Color and Print Scale**

1. In the **Layer dialog**, change the **print widths** of the following layer. Anything set to default will use **hairline** 

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GLAZING2	ତୁ <b>କ</b> ∎ ୍	Continuous 🔶 Default
TIT_BLK	େ∎ ଅ ଦ	Continuous 🔶 0.50

#### The default width is set in the Print dialog.

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X= -0.005 Y= 0.196 Inch		
Linetypes and Line Widths	*	
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definition)		
(Line patterns on paper look the same as in the model viewport)		1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
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2. In the **Layer manager**, the **diamond** marker is used to access print color. Pick it in the **Glazing layer row** and set the color of the glazing layer to **dark gray**. This color will be used of **Print Color** option is selected from the **Print dialog**. It will not be used if color is set to **Display** or **Black and White**.

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3. Here are examples of two print setups. The one on the left is configured with the following plot setting: Size of 11x17 Scale of 1=1 View Page Layout Page 1. The one on the right is configured with the following plot setting: Size of Letter Scale of Fit View of Extents.

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View and Output View Page 1 O Page Extents O Window Scale: 64.67% Scaled to Fit On Paper	New.	. Mave



4. Here is the final monochrome plot. Plot to device or PDF.