

Add 4 new sheets; STAIR X, STAIR TEXTURE, STAIR SHADING, and STAIR RAIL. It doesn't matter where in the sheet order you place these three sheets, as long as they are in that order and preferably kept together.

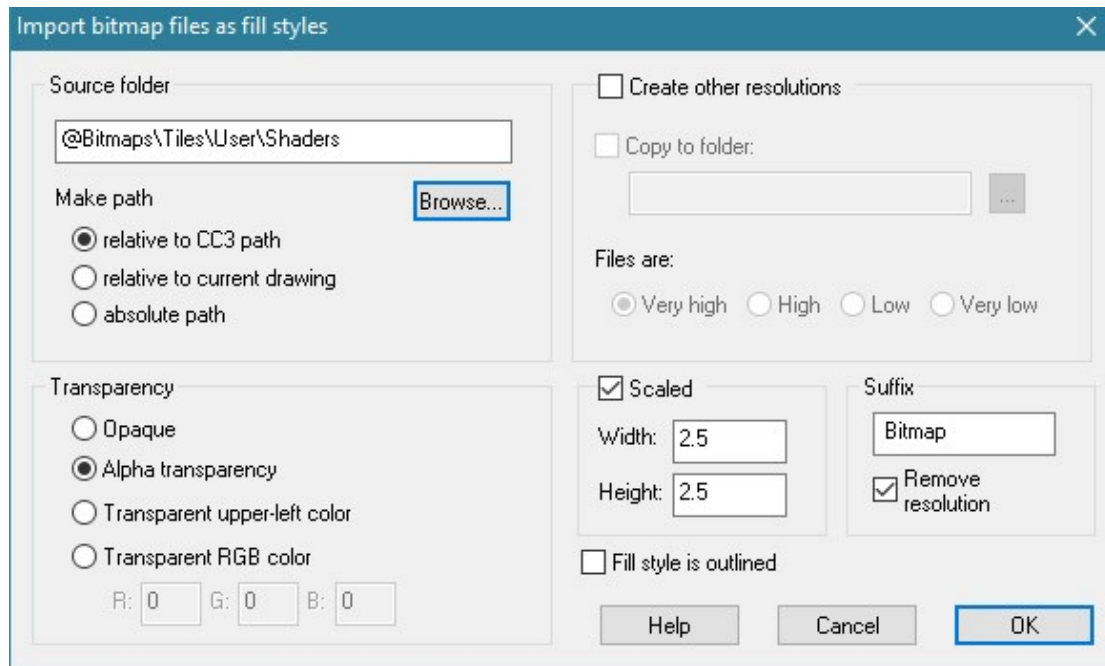
If you do not already have one, make a new folder in the Tiles folder called User, and then within the new User folder make a second new folder called Shaders. The

@\ProgramData\Profantasy\CC3Plus\Bitmaps\Tiles\User\Shaders

Download these two non-seamless fills and place them in the new Shaders folder.

<https://1drv.ms/f/s!AgJAv-rukPfHrSWMIMzq95IC5U2R>

Open CC3+ and go to Tools → Import Bitmap Fill Styles

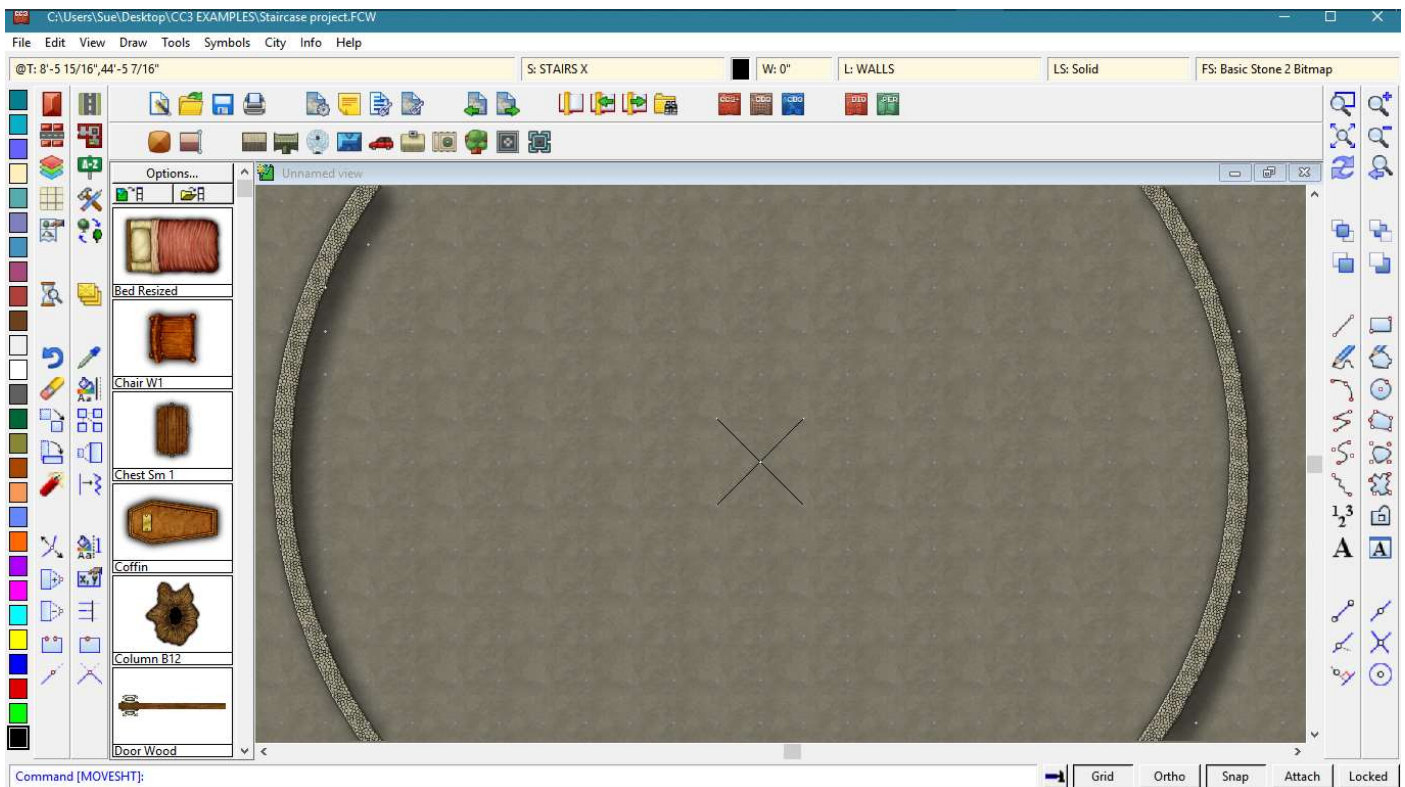


Use the Browse button to find the new Shaders folder and double click on one of the two png files within it.

Check the Scaled box. If you are using feet and inches in your map set the width and height to 2.5. If you are using metres set the width and height to 0.75 metres. (That's a guess, by the way – I never use metric templates, but it's supposed to be equivalent to approximately 2.5 feet).

Click ok, and wait for CC3 to import the fills.

With the STAIR X sheet active, draw a simple cross at the centre of the invisible circle that would define your staircase if you extended it to become a full circle. If the staircase is to run around the outside of a tower, then the centre of the tower would be the spot to mark the X. Here I have drawn a large round tower (of a size that you wouldn't really expect to find a ready-made staircase symbol to fit) and then marked the centre with an X on the STAIR X sheet.

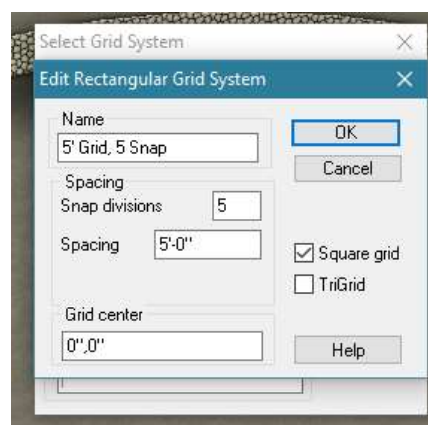


I want to make a staircase that goes up around the outside of the tower by one level. It will be made of stone, designed for humans to use, and have a stone banister rail on the outside edge.

The first thing to do is work out how many steps are required to go from the bottom to the top of the staircase. In my example I want to go up just one level, and the level is about 10' tall. For humans a Rise (the height of each step) of about 9" is the maximum for comfort. Any more than that and it becomes uncomfortably steep (this rule is often broken by spiral staircases in medieval castle towers). So I need a minimum number of 14 steps to go up by 10 feet. I am anticipating that this staircase will only travel around about 1/6 of the total circumference of the tower, so I need to draw a segment shape that will fit around the tower 6 x 14 times and only use a section of them 14 segments long to make the staircase. $6 \times 14 = 84$ steps.

Make the fill 'Hollow' and the colour red.

Make STAIR SHADING the active sheet and turn on the Snap grid. If necessary adjust the grid by right clicking the Snap button and editing the grid so that you can snap to small enough divisions (I edited my 5 foot grid to allow me to snap to each foot by adding 5 snaps to it instead of just 1, but you might want to go even smaller than that if your tower isn't as big as mine, which has a diameter of 54 feet and has a wall that is 3 feet thick).

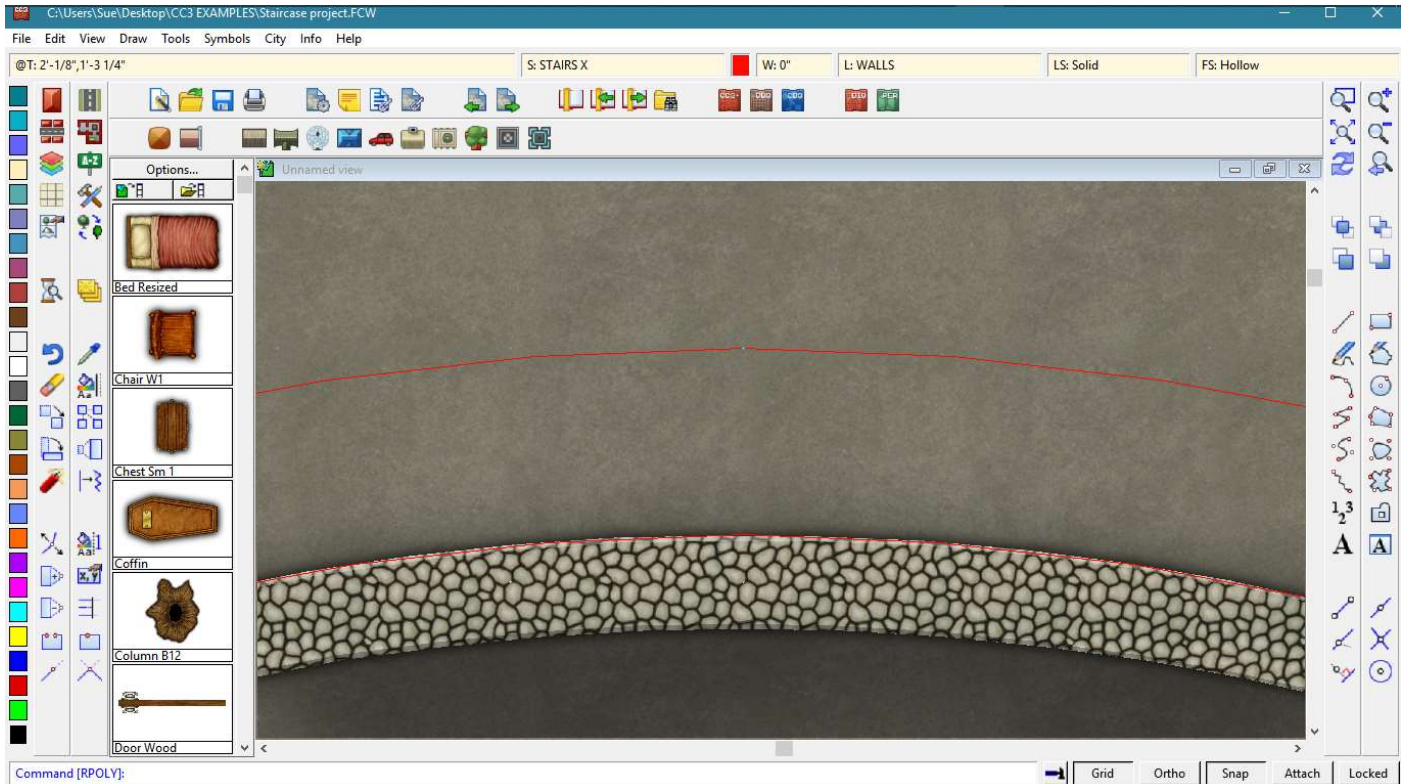


Right click the Polygon tool and pick Regular Polygon from the sub-menu and type 84 when prompted for the number of sides in the command line.

Click once on the cross mark you have drawn (which hopefully coincides with the snap grid), and then extend the 84-sided polygon out **absolutely vertically** (using the grid to help you) so that its extent falls either exactly on the outside edge of the tower wall, or just inside it if the snap won't allow a good fit.

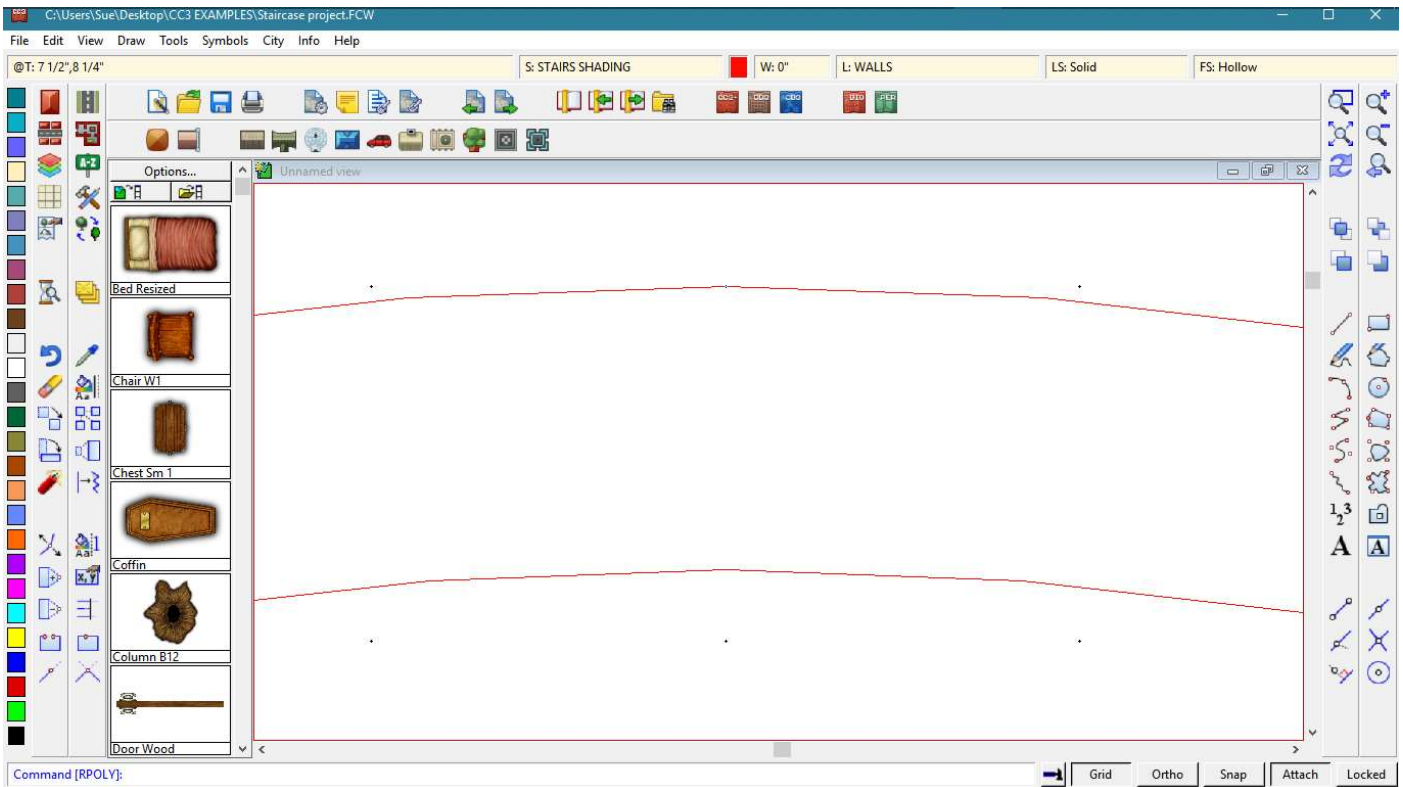
Then draw a second identical 84-sided polygon from the same X mark, but make it about 3-5 feet larger in radius than the first one. This will mark the outside extent of the staircase – the width of the stairs.

It should look a bit like this now.



I have chosen to make my stairs 4' wide, but you can make them as wide or narrow as you like.

Make STAIRS SHADING the active sheet and hide all others except the STAIRS X sheet, so that you have the red lines visible without any background distractions.

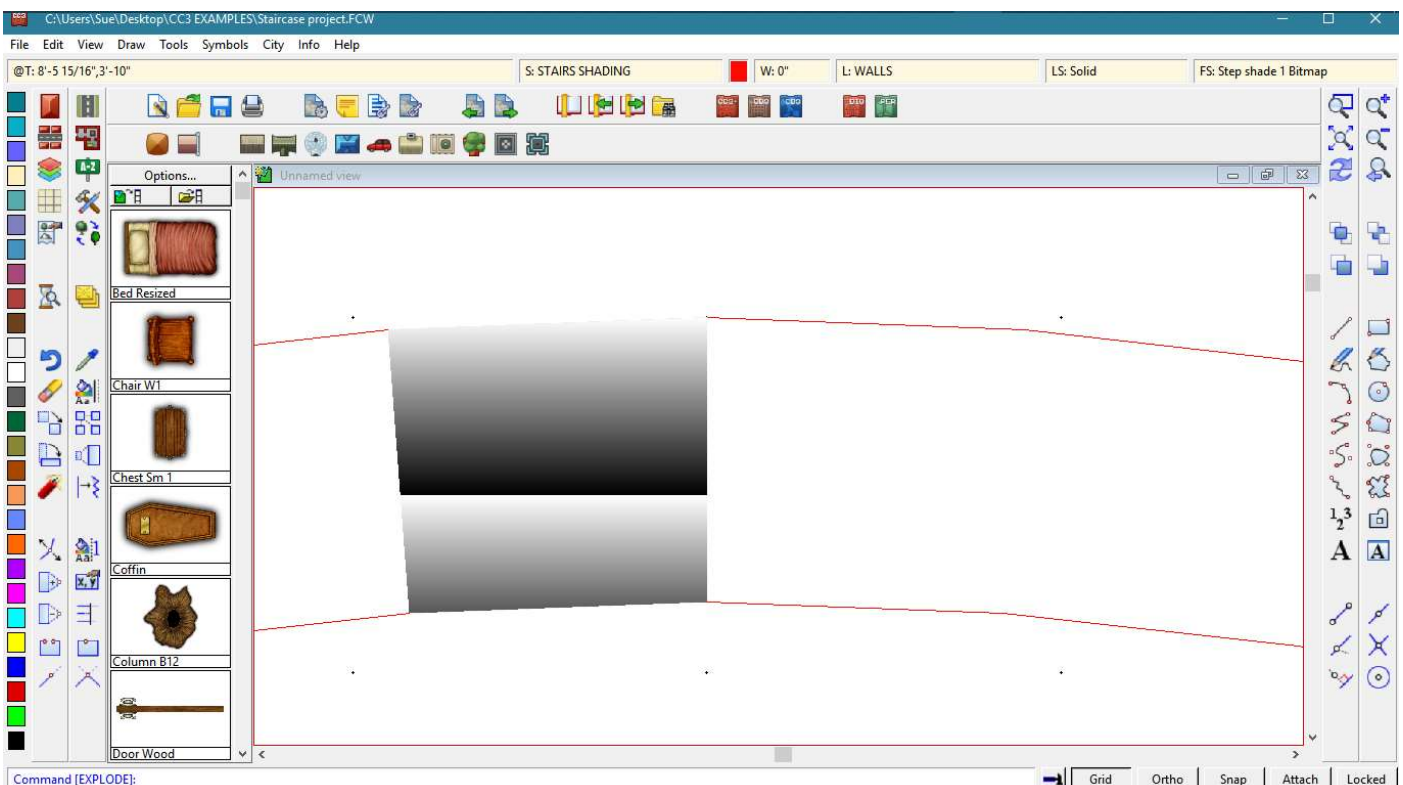


Look closely at the red lines and you will be able to see the nodes where the tiny segments of the polygon join at the 84 corners it has. It is these nodes that will allow you to draw an absolutely perfect step shape.

Turn off the Snap, and turn on the Attach button next to it.

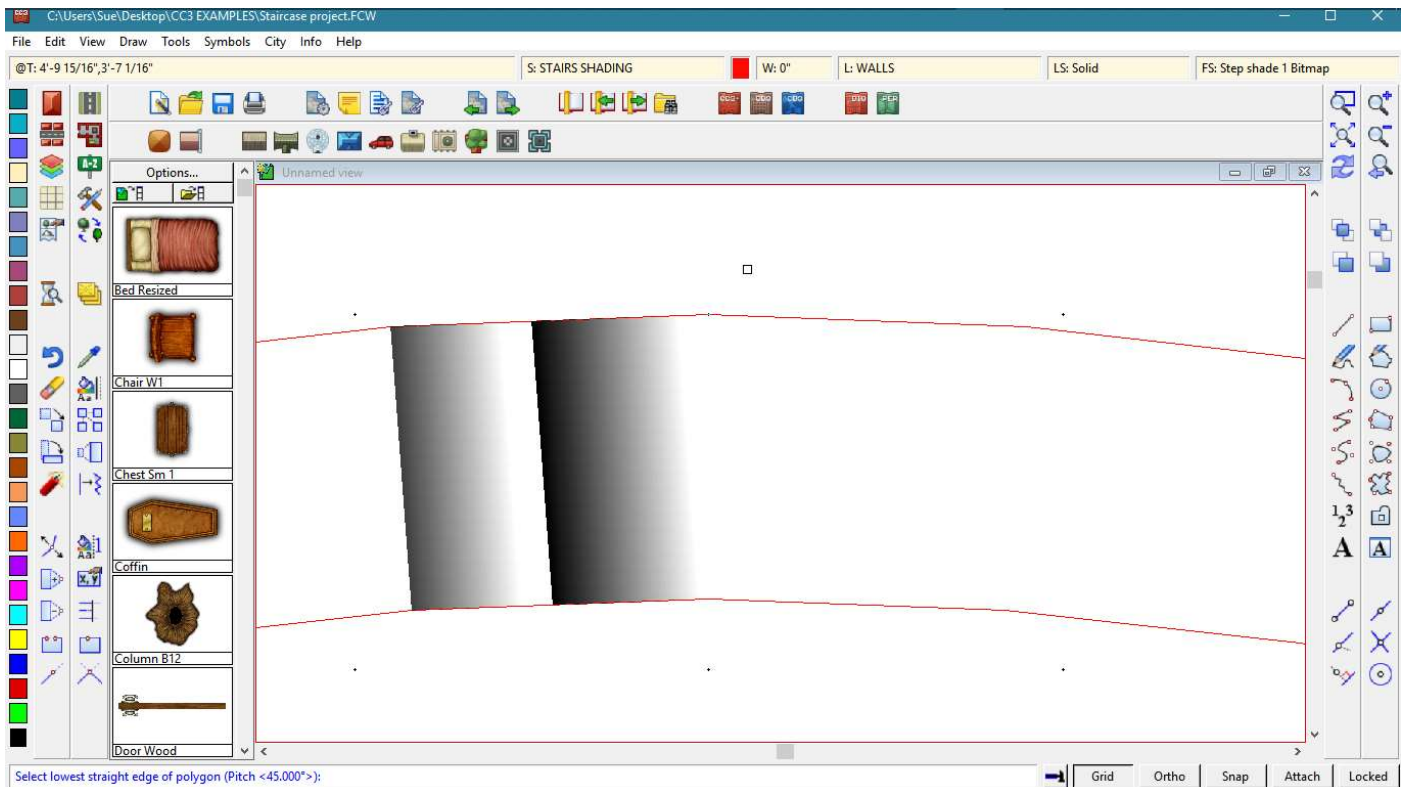
Change the fill to either one of the two new shaders you downloaded and placed in the Shaders folder earlier by picking one of them from the Bitmap fills dialog dropdown box.

Then click the polygon tool (just an ordinary polygon this time) and click the four corners of the segment you want to make and finish the polygon. Because you have activated Attach each node will snap to the closest node. When done you should have something like this.

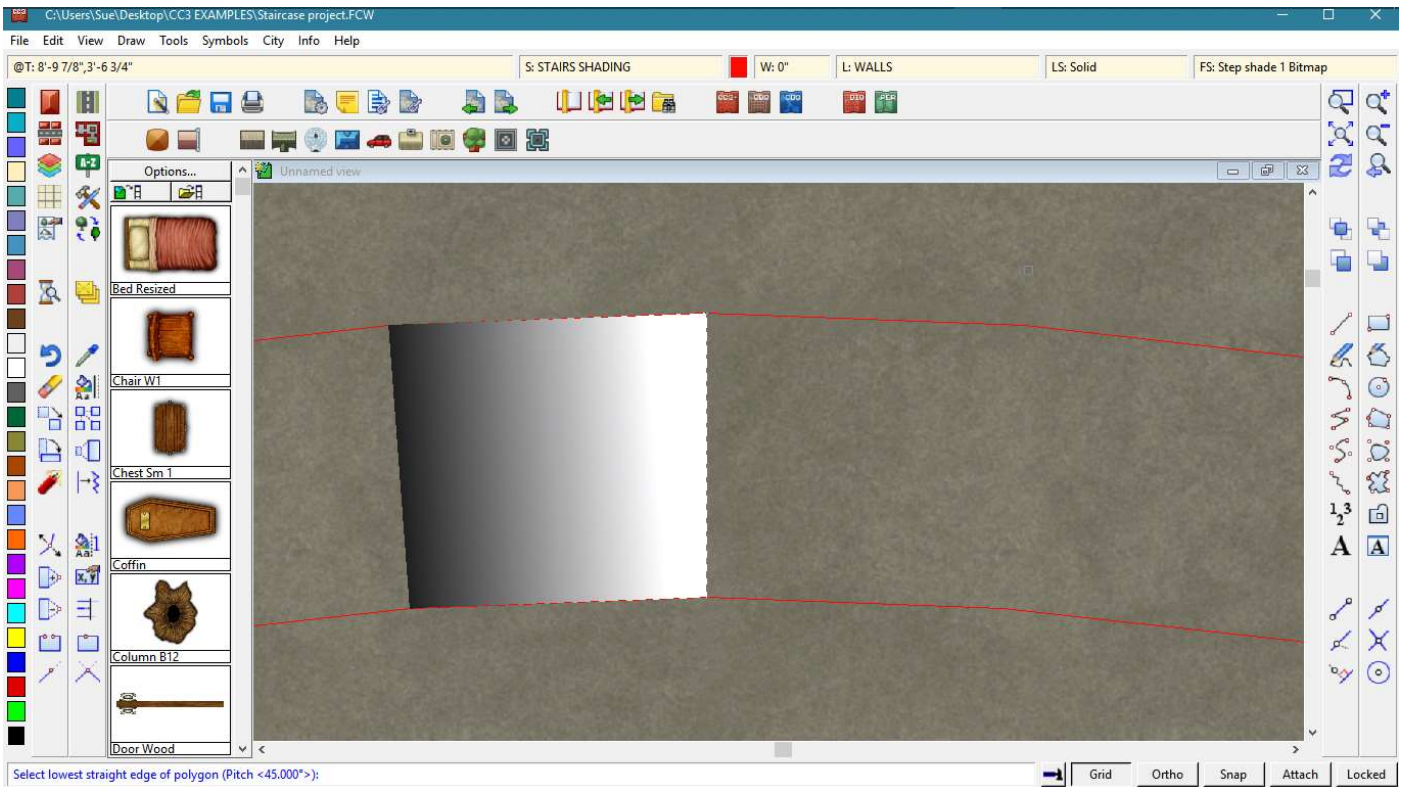


Ok. Well, I can see from this that my steps are going to be so large that they will be the kind of steps you have to walk along before you get to the next one. I should have used maybe twice as many steps and anticipated a much smaller segment of the circle – about 1/12 perhaps. However, I am only trying to show you the principle here, and this tutorial was written much faster than I would normally want to write one, so we will carry on with our super-wide steps.

Turn off the Attach function and right click the Polygon tool again. Pick “Shaded Polygon (Angle by Edge)”. Use it to click the edge that will be the back edge of your step. This will align the fill so that the darkest part aligns itself to the back of the step.



I will now adjust the scale of my bitmap fill so that I only have one band across the step. The dimension that matters is the Height. Changing the Width will do absolutely nothing to the appearance of the fill. If you also have this problem with your steps, adjust the Height until there is only one gradient change across the space of the step – like this

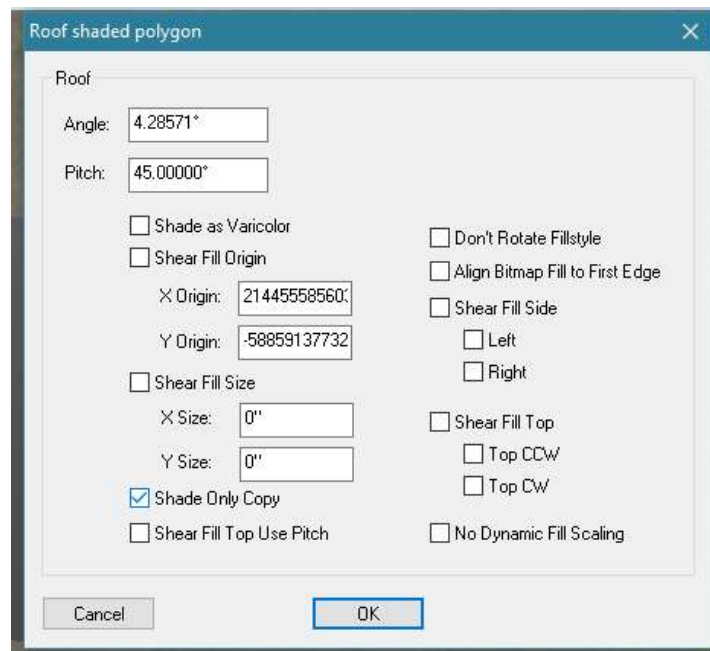


I have shown the background again so that you can see the step.

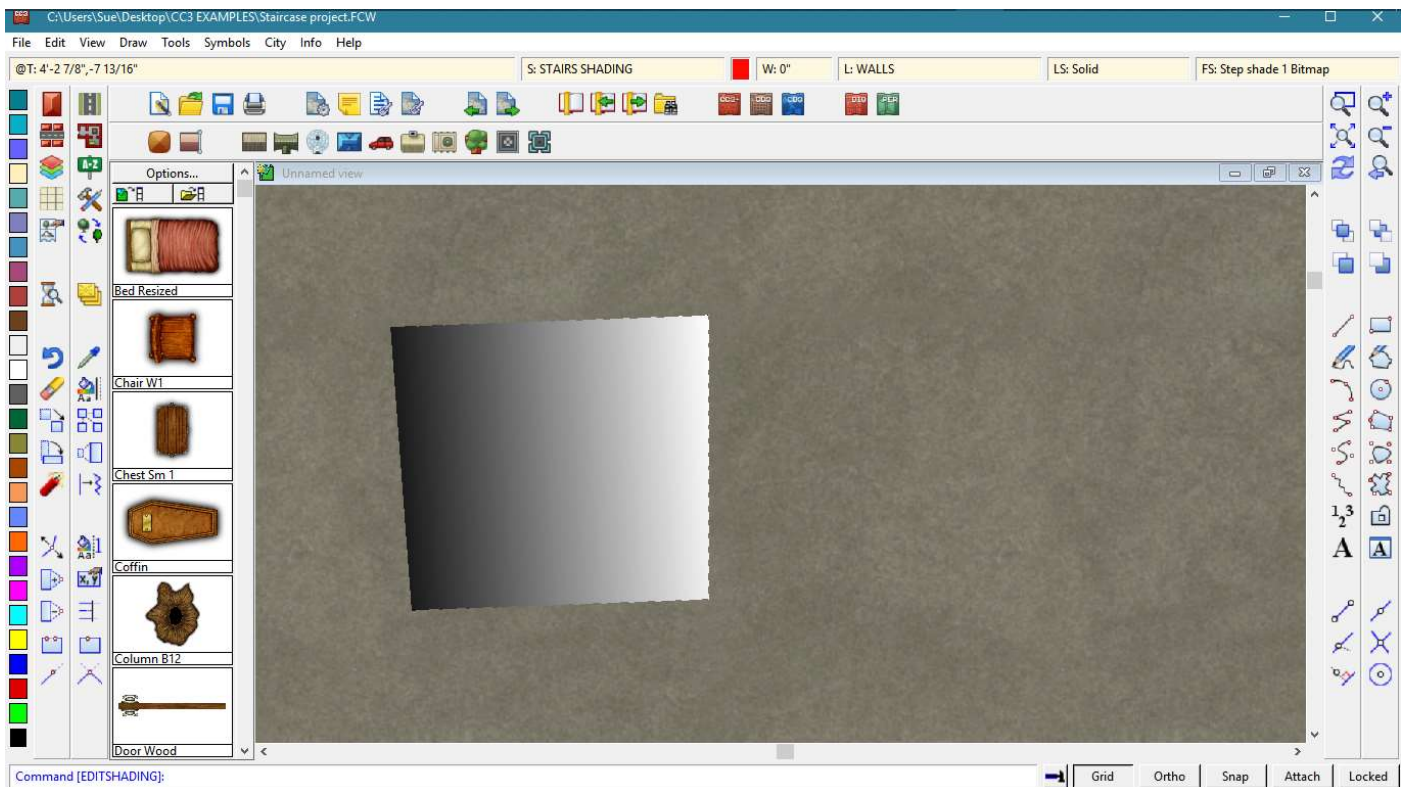
Now you can delete both the red polygons. These were drawn only as a guide for the step.

Now comes a stage you may not understand, but it's a very necessary part of the process.

Type "EDITSHADING" on your keyboard. It will appear in the command bar. Press Enter and pick the new step. In the dialog that appears check the "Shade Only Copy" box and OK.



You might notice that the blinding glare on the front edge of the step has calmed down to a more natural looking white... or you might not.



If you forget to do this now you will have to do it to each of the steps individually later on.

Ok. Zoom out again so that you can see the X and the new step.

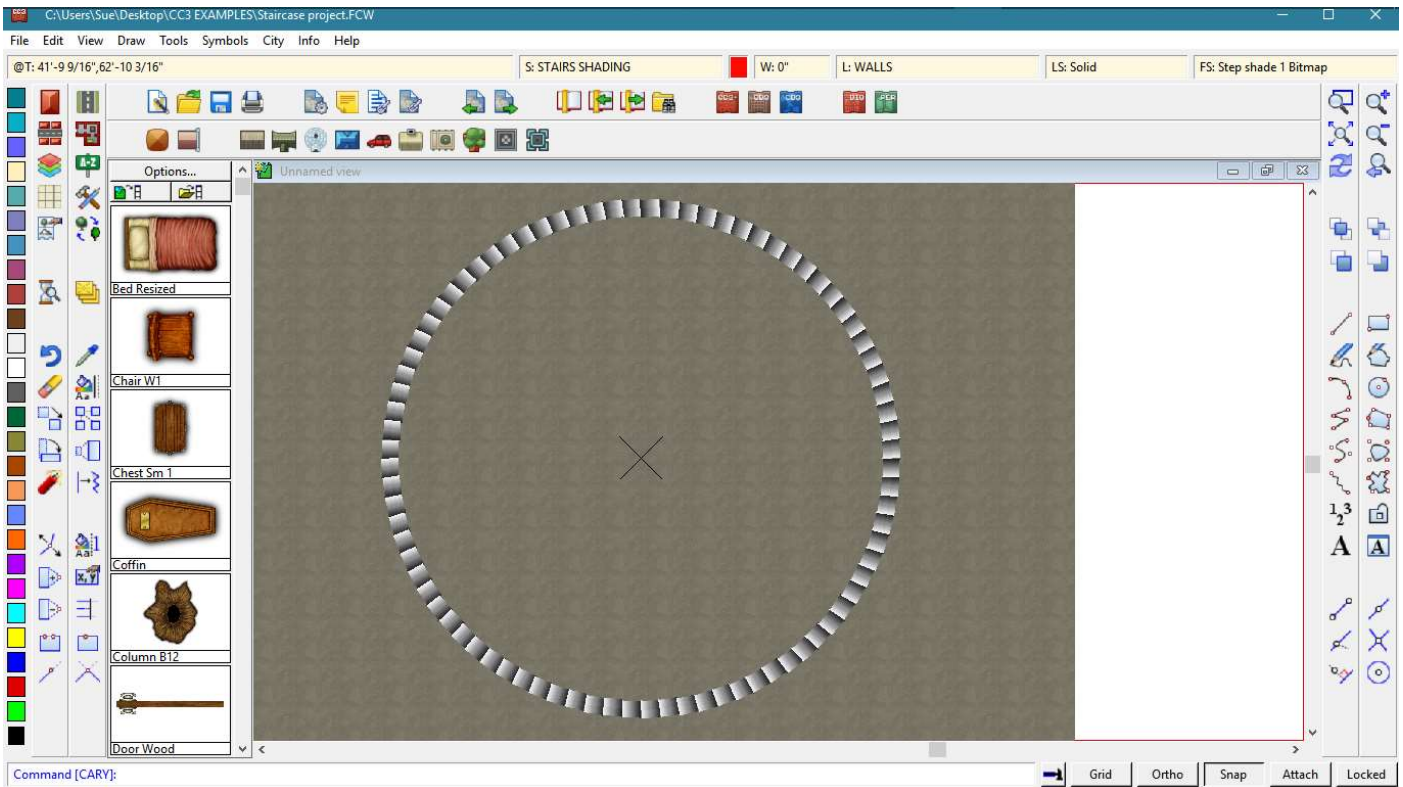
Right click the clone tool and pick Circular Array.

Pick the new step and Do it. You will see the command line is now asking you for the number of spokes. Even though you only want 14 of them type and enter 84.

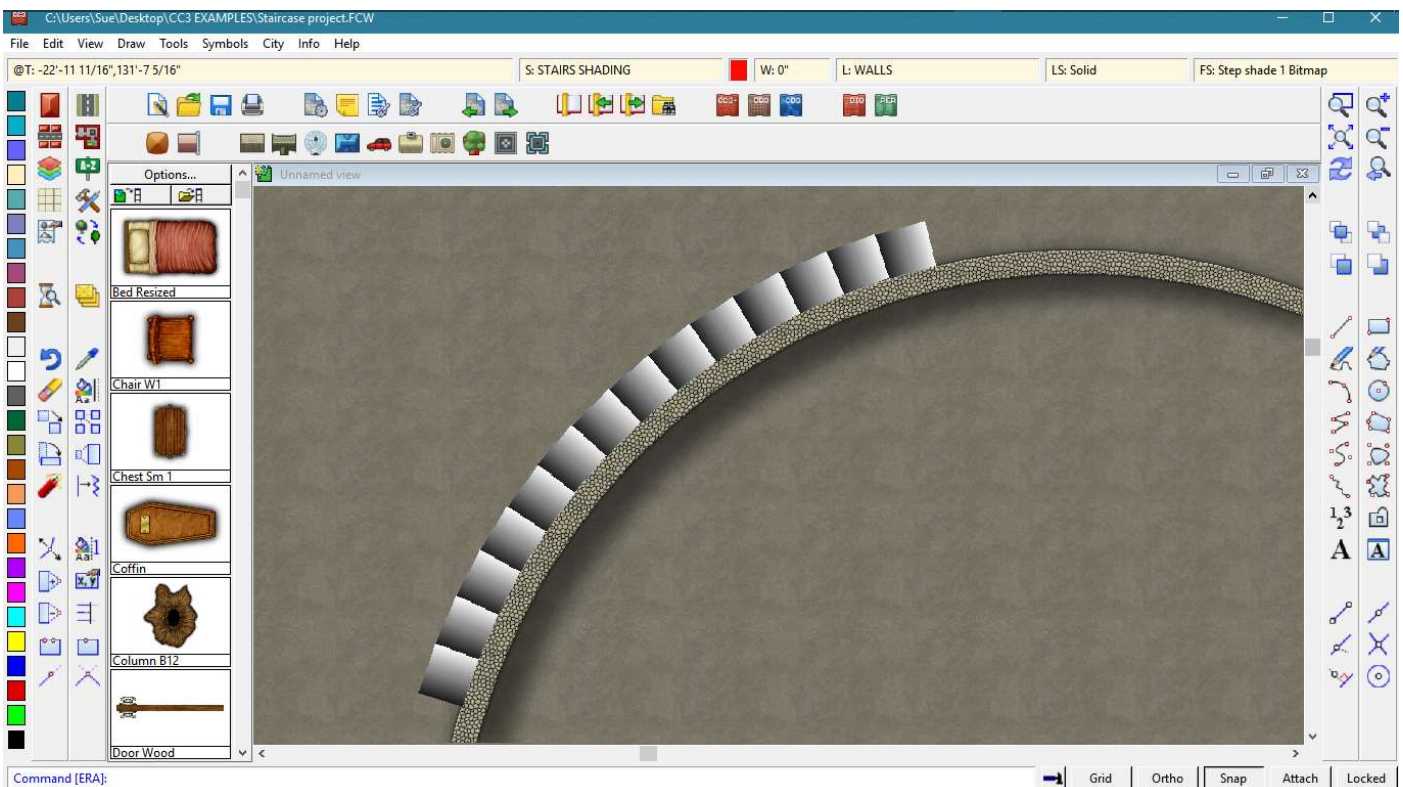
Next you are asked for the number of rings. Just leave that as 1 and hit enter again.

When you are prompted for the array centre turn Snap back on and click the cross once, and then again once.

The command line will ask you to confirm the angle between spokes. Just press enter.

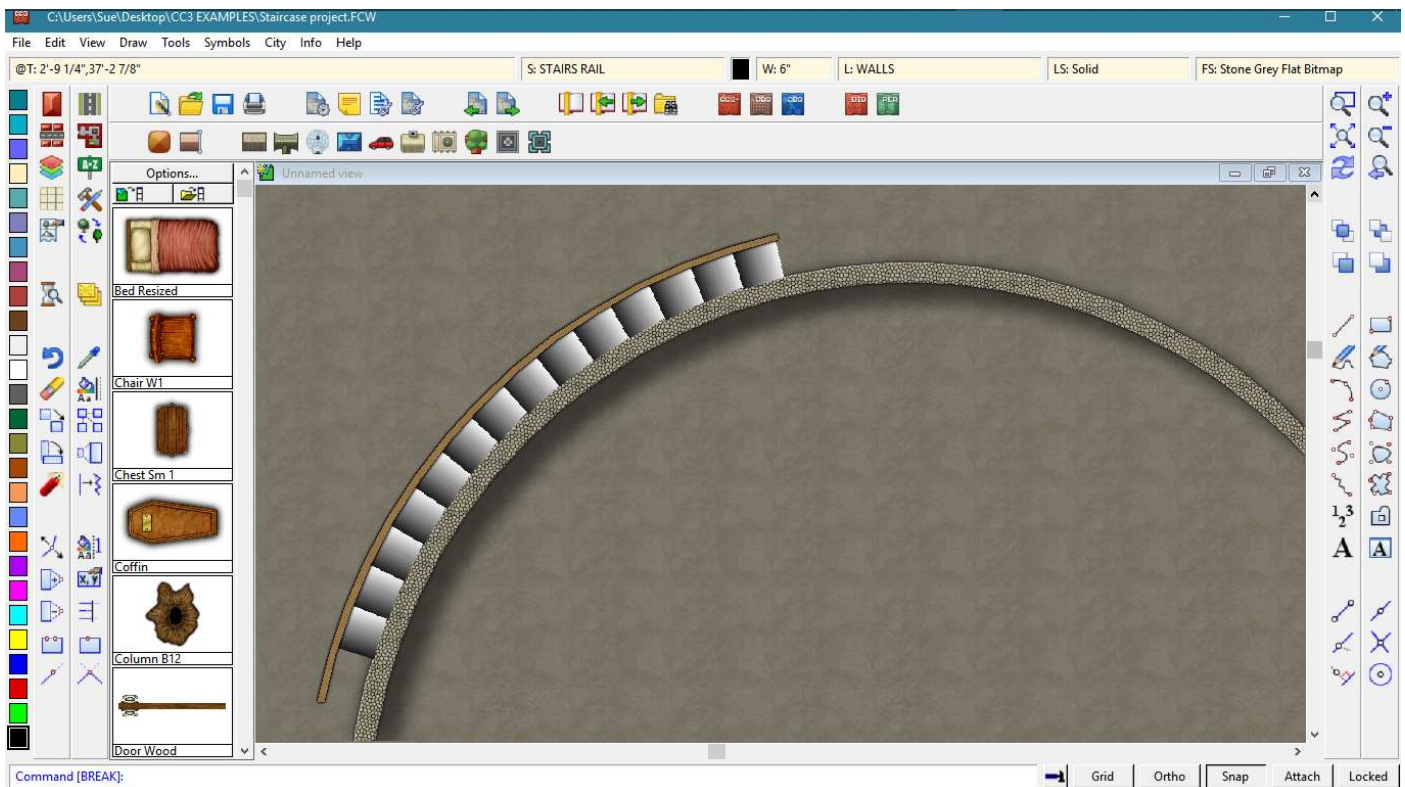


Pick the segment you want to keep and delete all the rest.

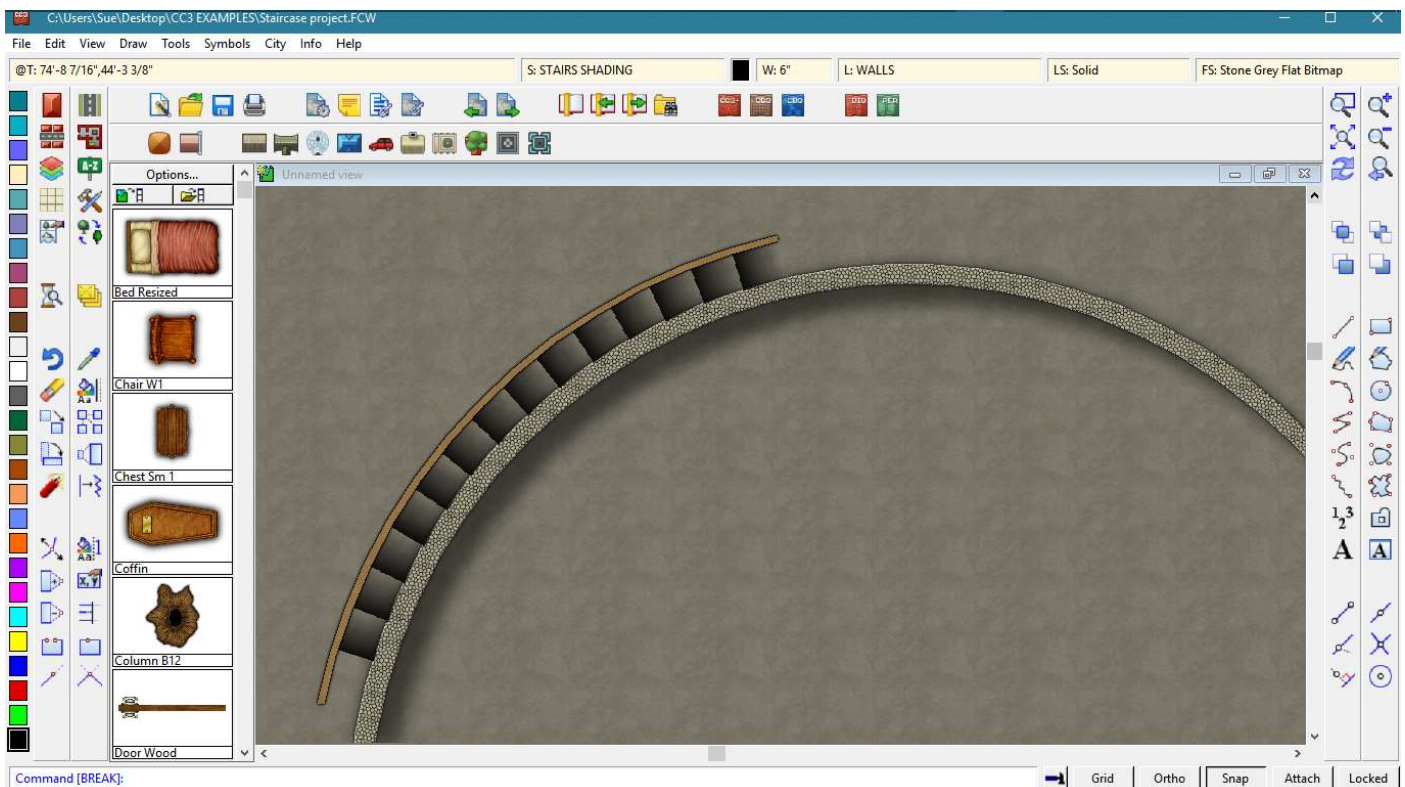


Make STAIRS RAIL the active sheet, change the fill to a suitable stone fill for the banister rail, and make the line width about 4-6 inches. Then using the circle tool draw a circle starting from the X and place it so that the banister rail encompasses the stairs and appears on its outside edge.

Use the Break tool to trim the circle so that the banister runs the length of the stairs and a little way further at the top to allow for a landing.

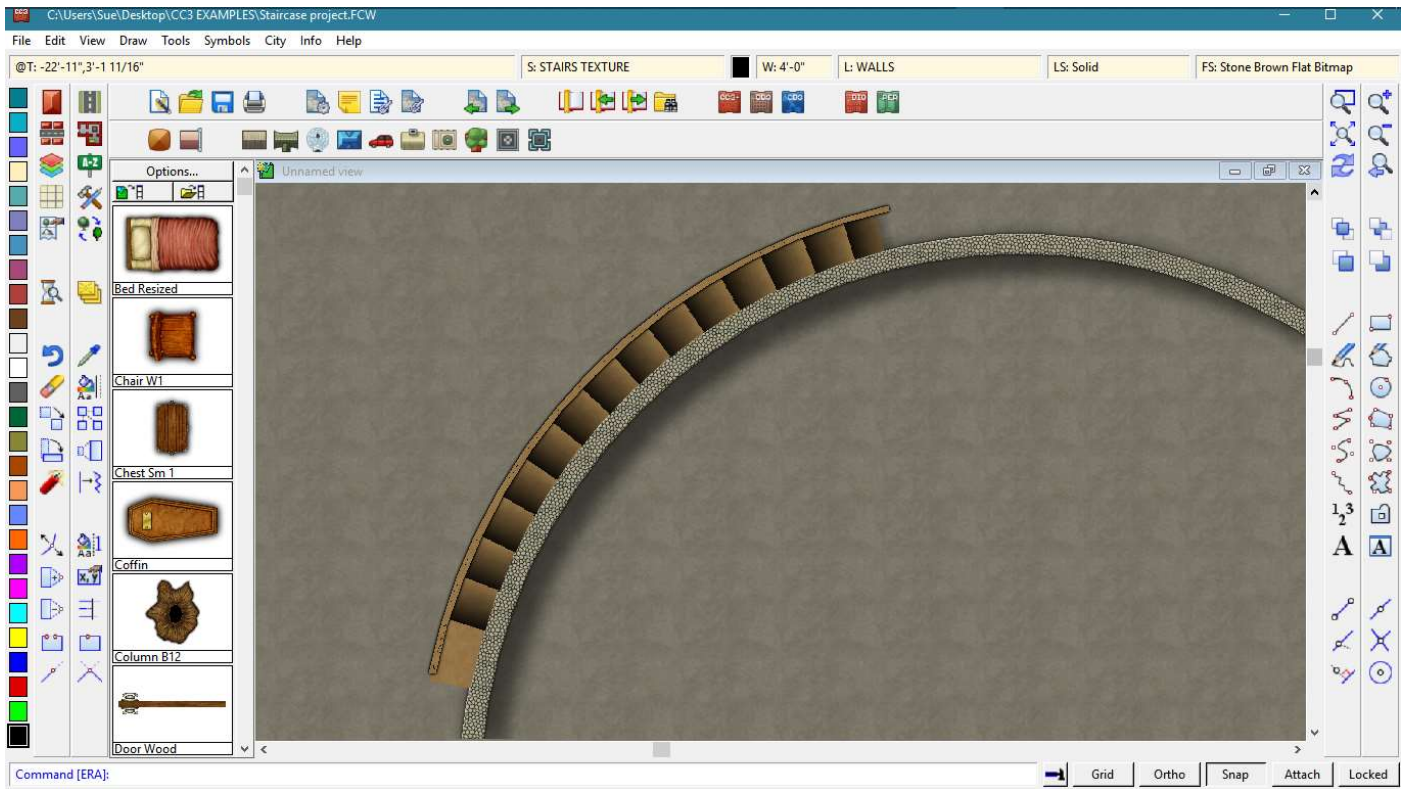


Now add a Blend Mode sheet effect to the STAIRS SHADING sheet and set it to multiply.



In its most basic form the stairs are now finished. They are, however, transparent thanks to the Blend Mode, so a flaw in the plan is that you can't really use this method on the shaded side of the tower – not unless you can draw it perfectly enough that the stairs can be placed above everything else and a ring of stair material is added to the STAIR TEXTURE sheet.

I did this one by changing the line width to the same as the width of my staircase (4 feet), and drawing another circle from the X on the STAIR TEXTURE sheet – completing it 2 feet into the staircase and trimming it the same way as the banister rail.



I hope this will be sufficient to tide you over until the PF team are able to sort out a macro for us all.

Sue 😊