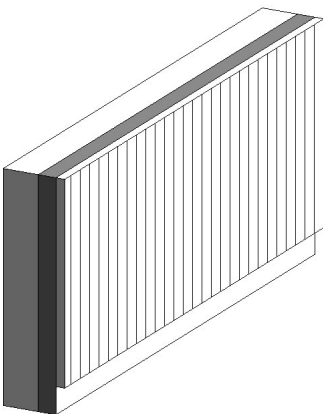


Please Note: If you're new to Revit, you may be interested in my "[Beginner's Guide to Revit Architecture](#)" **84 part video tutorial training course**

. The course is 100% free with no catches or exclusions. You don't even need to sign-up. Just enjoy the course and drop me line if you found it useful. The [full course itinerary can be viewed here](#)

In this tutorial we will take a look at Revit's "Layer Extensions" in Vertical Compound Walls. As you know, Walls are a System Family in Revit- where you then create as many Types as you wish. A Compound Wall is built up of one or more "Layers"- each having a user-definable Function (ie Structure, Thermal Layer, etc).



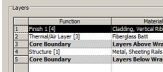
When you first start playing with Walls in Revit, you are most likely not aware of just how powerful (and configurable) they actually are. For example, you may assume that every wall simply has a Bottom and Top Constraint and that all layers in the "vertical sandwich" must have the same top and bottom constraints? Well, you'd be wrong in that assumption! What if you wanted one or more of those layers to start or stop at a different height from the rest, in the same overall wall? Not a problem! We're now going to show you how to do just that.

For this tutorial, I am going to use a very simple compound wall type. I'm going to use "[Cav 50 100 200 Cladding](#)"- which has 3 vertical layers.

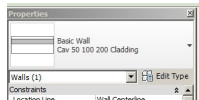
Here is our wall in section.....

If we "Edit Type" and take a look at the "Edit" the "Structure" of the compound wall, we get to the "Edit Assembly" dialogue box, where we can see the layers on our Compound Wall.....

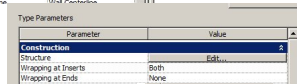
So by default, all three of our layers in the wall start and stop at the same respective heights. But what if you wanted the external cladding layer to start 150mm higher than the base of the wall. Let's do that now. First of all we need to enable the "???? Extension" parameter for this wall type- this will then allow us to set an offset distance for the layer(s) to start at. To do this we need to....



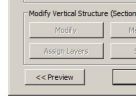
1) Edit the Type.....



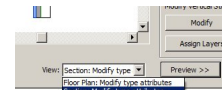
2) Edit the Structure (for this Type)



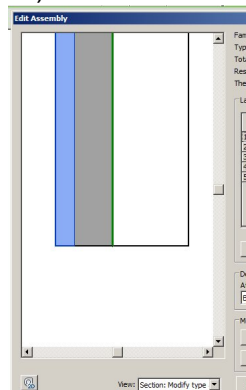
3) Enable the Preview of the Wall Assembly



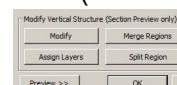
4) Ensure that the Preview is set to "Section: Modify type attributes"



5) Now I need you to zoom in (in the Preview window) into the base of the wall section. Your preview window should look something like this....



Note: The reason we zoomed in is because we need to be able to select an individual layer in the assembly in order to "unlock" its Base Constraint. 6) In order to modify the layer, hit the "Modify" button in the right hand lower panel (named "Modify Vertical Structure (Section Preview Only).....



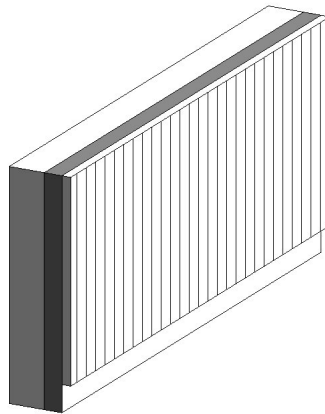
Once you have done this, try hovering over various parts of the wall, in the preview panel- you will notice that as you do, the edges light up to show you they are selectable. 7) Let's go ahead and "unlock" the constraint from the Cladding layer. Select the bottom edge of the cladding layer in the section preview window. When you select it you will notice that a Padlock

appears- simply click on the padlock to "Unlock" it....

Now we're ready to rock! We can now set a distance that we wish to start this layer at "relative" to the overall Base Constraint of the wall as a whole. You can now come out of the "Edit Assembly" and "Edit Type" dialogue panels- we have finished with those. Just keep hitting "OK" until you've put them away.

NOW: I want you to take a look at the Properties panel for the wall. Notice a few parameters down from the top, you now have access to a parameter named "Base Extension Distance" Bingo! That's what we wanted. Now all we have to do is set the offset distance we need- we decided on 150mm, so let's enter that into the parameter and see what happens. Check out the base of our wall in section.....

And here it is in 3D.....



And there you have it. You now know how to start and stop individual layers at different heights from the rest of those in the wall. Exactly the same principle can be applied to the top of each layer. You can also unconstrain MORE than one layer in a wall assembly. The ONLY rule to remember is that unconstrained layers MUST be adjacent to one another. So for example, in a 10 layer wall assembly- you can unconstrain (let's say) 5 of those layers- as long as all 5 of those are CONSECUTIVE somewhere in the "sandwich"