

Revit Architecture 2014 – Curtain Wall Panels

Revit Architecture 2014: Curtain Wall Panels (Ref: January 2014)

Create a curtain wall type with double-glazed panels.

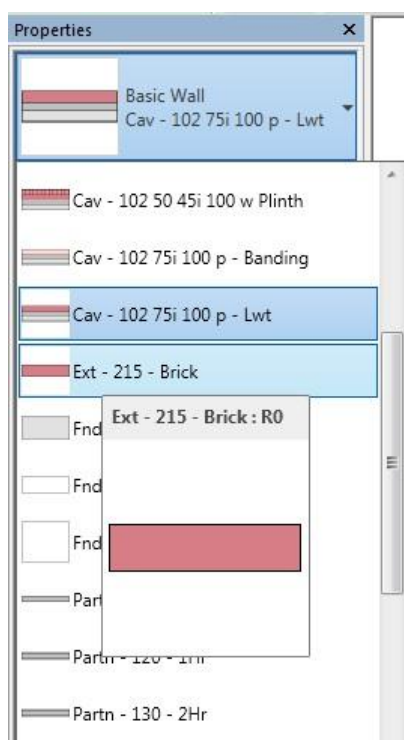
Introduction

Revit Architecture 2014: Double Glazed Curtain Wall Panel

In an earlier blog from last year, I outlined the steps to create a louvered curtain wall panel (9/09/2013) The procedure to create a double glazed curtain wall panel is very similar.

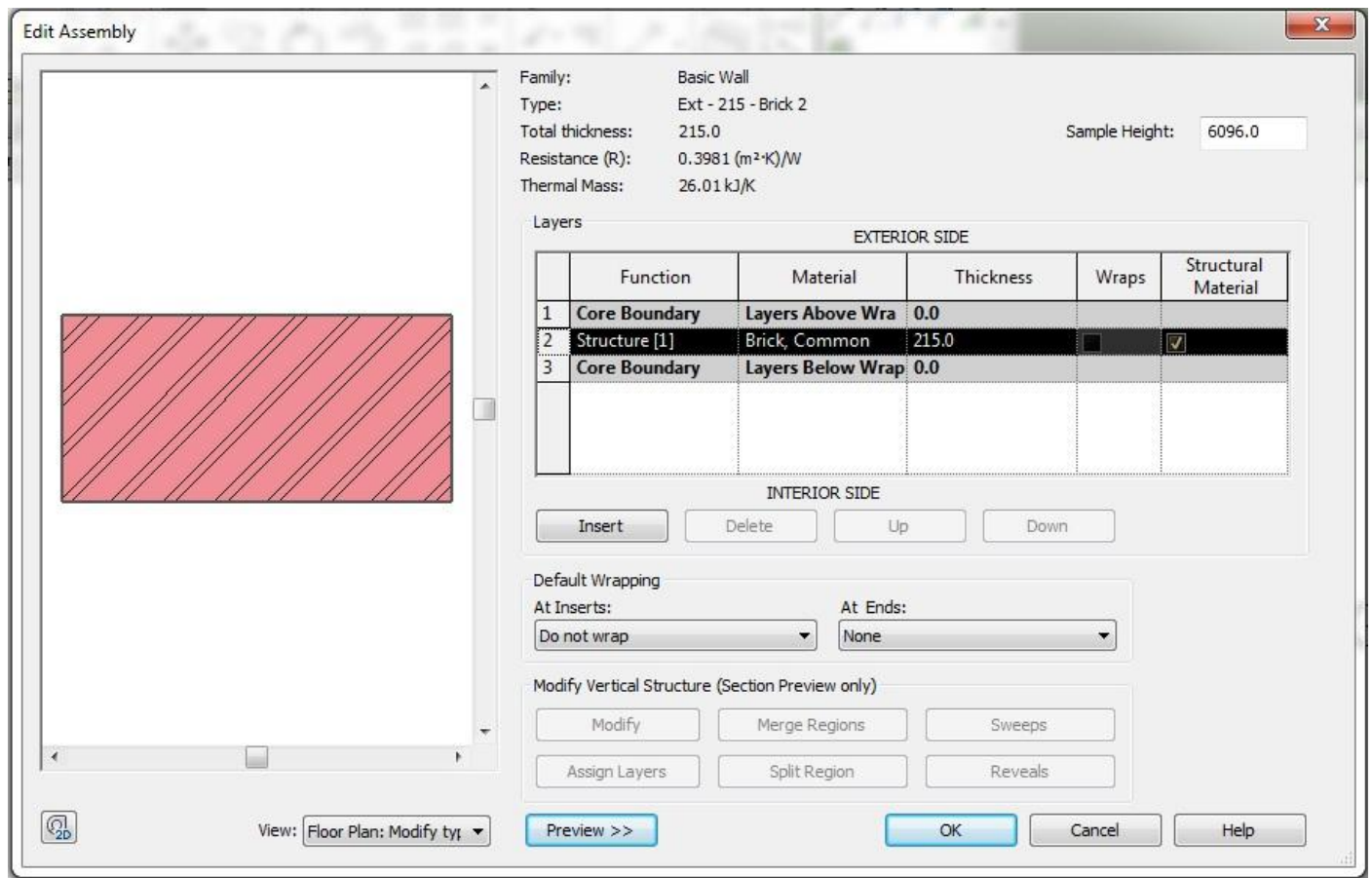
Step 1: Edit a Basic External Brick Wall (fig 1)

Fig 1: Basic Brick Wall Selection



- From the Type Selector drop down menu select the basic Ext – 215 – Brick : RO
- Click the Edit Button just underneath the Type Selector to access the Edit Assembly dialogue box.
- Click the duplicate button and rename the wall to Double –Glazed Glass Wall Unit.
- Click Edit Structure to preview the layers / materials in the wall (fig 2).

Fig 2: Basic Brick Wall Structure

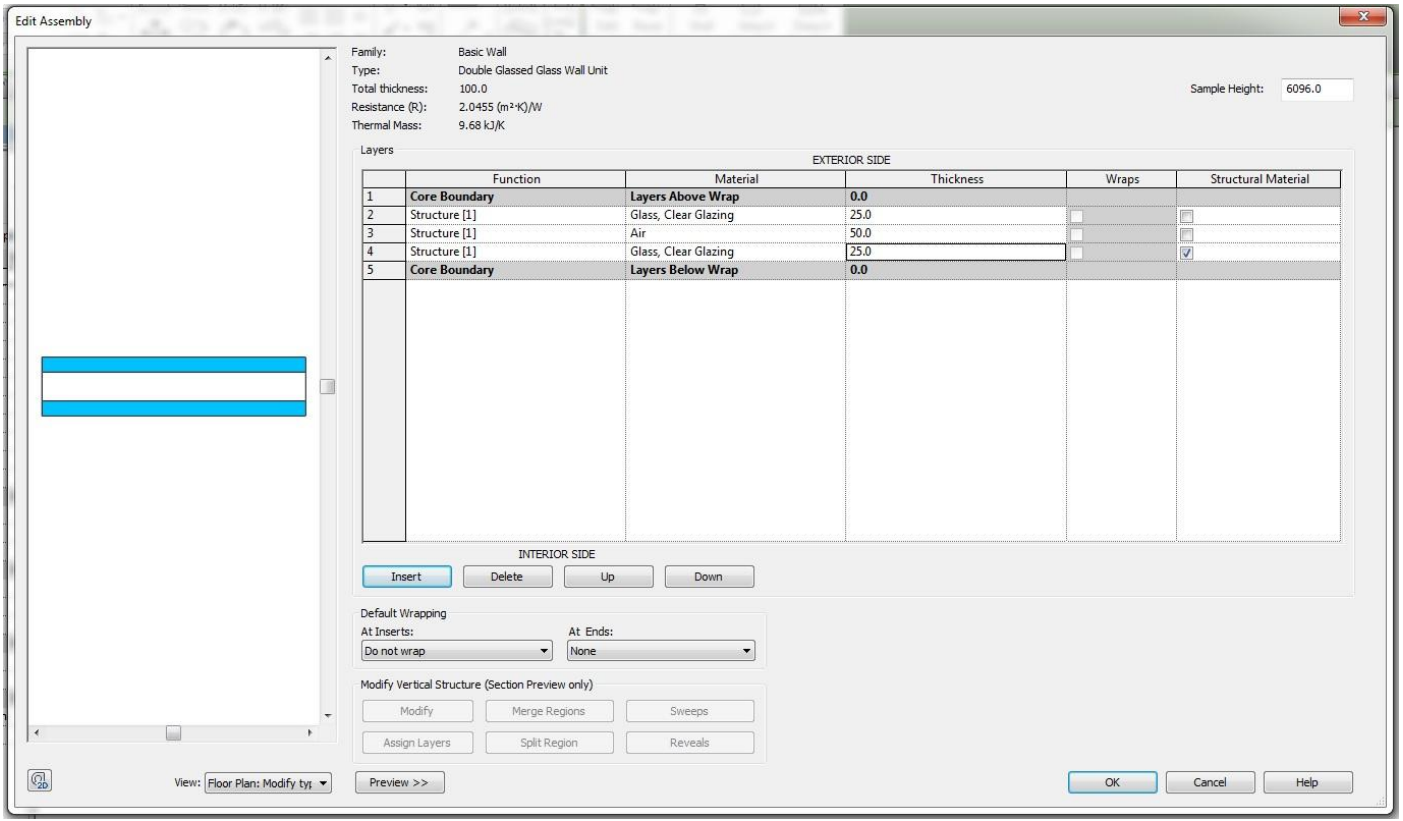


As there is only one structural layer in the brick wall it will be easy to change its structure to represent the double-glazed glass wall unit which can then be inserted into a curtain wall system.

Step 2: Edit Wall Assembly

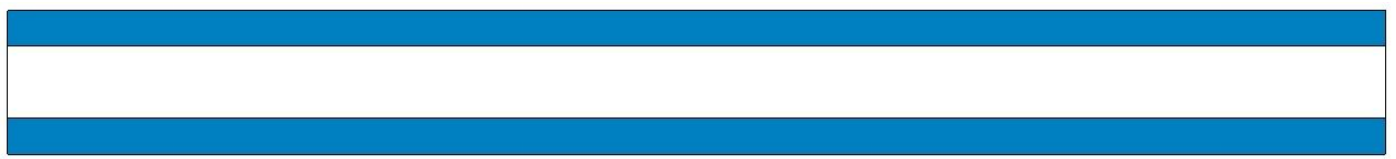
Click the Insert button to add two extra layers. Add materials and adjust thicknesses as shown in fig 3 on the next page. To bring up the Material Browser just click inside the Material column beside the appropriate layer. (for example: click to the right of the words Brick, Common). To change the thickness of a layer double click on the existing thickness and type in the desired thickness. The preview will reflect any changes.

Fig 3: Edit Wall Assembly

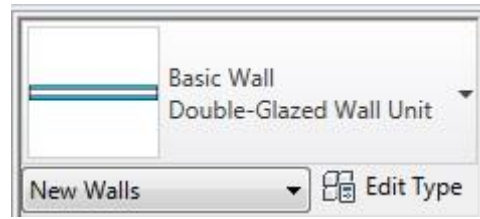


The preview in fig 3 clearly shows our new wall type with materials and thicknesses applied. By applying clear glass glazing to the external layers with an air gap in between we have successfully created a double-glazed glass unit that we can insert into a curtain wall (fig 4).

Fig 4: Double-Glazed Glass Unit – Plan View



Remember that this glass unit is in effect a new wall type that will now be listed in the wall type drop down menu (fig 5).

Fig 5: Basic Wall Double Glazed Wall Unit

Step 3: Insert Double-Glazed Wall Unit

- Select the Exterior Glazing Curtain Wall Type from the Type Selector.
- Draw a short length of curtain walling and add mullions.
- Select a single panel (use the tab key to cycle elements) then right click and select panels along horizontal grid (fig 6). You can also just change one panel and then use the match properties tool to change the rest.
- Select you newly created Double-Glazed Wall Unit from the Type Selector drop down to update all the selected panels (fig 7).
- Repeat this process to swap out all panels.
- Draw a section through the curtain wall to see that it now contains double-glazed panels.

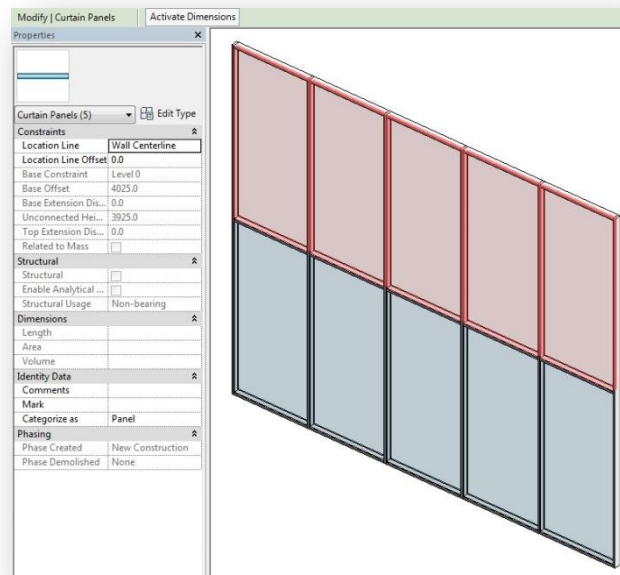
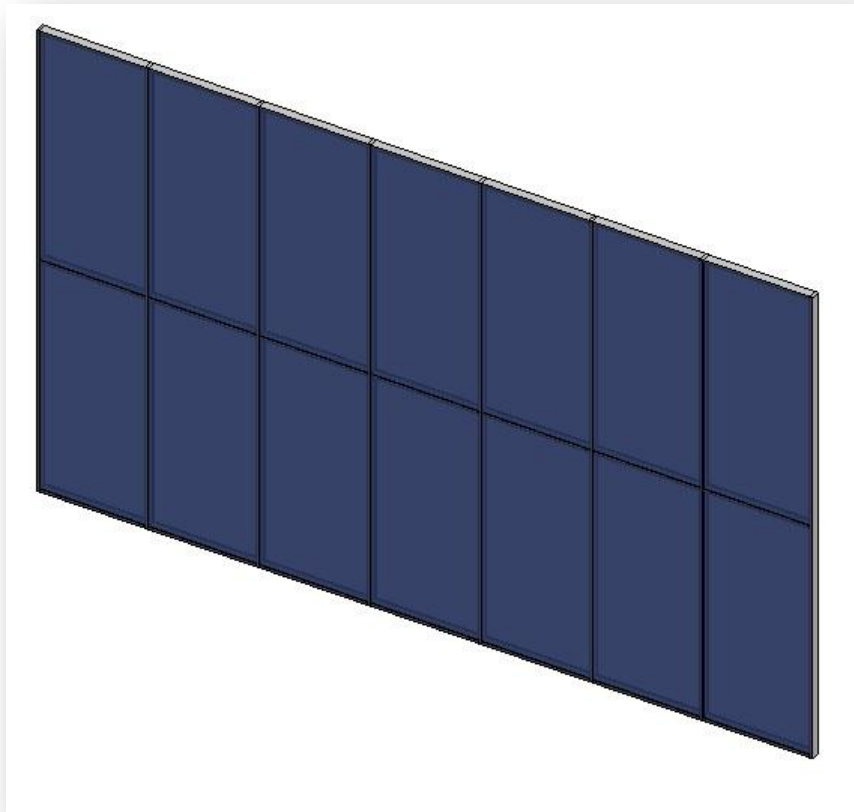
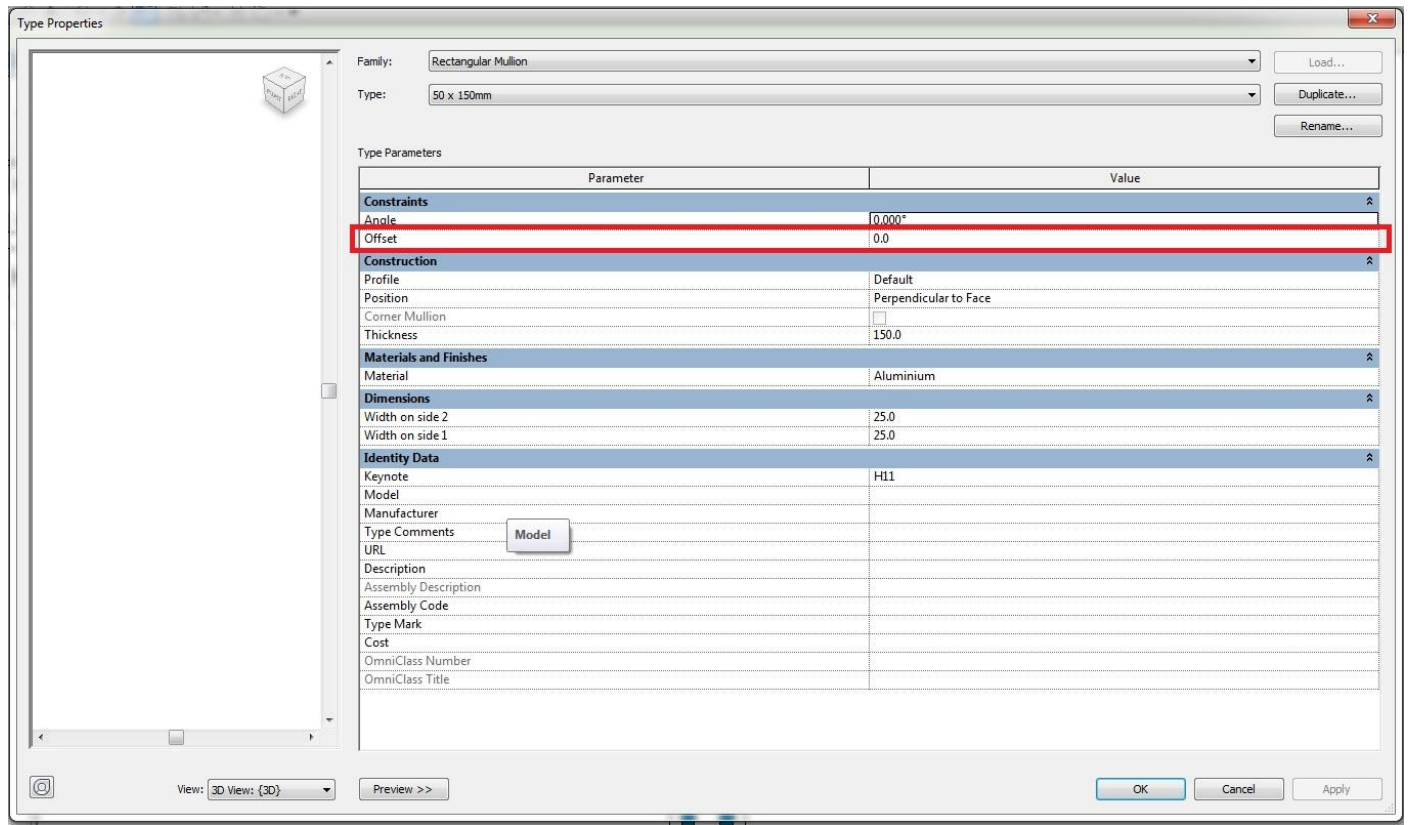
Fig 6: Select Panels along Horizontal Grid (shown in red)


Fig 7: Swap Panels along Horizontal Grid



The section view will show whether or not the mullions are the correct with. You can adjust the offset distance of the mullions by selecting a mullion and clicking on edit type (fig 8).

Fig 8: Adjust Mullion Offset (outlined in red)



Conclusion

If you follow the steps above successfully you will appreciate that it is possible to create a double-glazed assembly without bothering with the family editor and without worrying about parametric arrays, nesting components etc.

Note: You could experiment further by applying a different material to the wall mullions.

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