

# Revit Detailing Tutorial

## Basics



A guide to the basics of detailing in Revit 2023.

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# Interface



## MOUSE CONTROLS

1. Select objects - Left click
2. Context menu - Right click
3. Pan - Hold in scroll-wheel and drag
4. Zoom - Move the scroll-wheel
5. Zoom extents - Double click wheel to zoom extents

## WINDOWS HOTKEYS

- |                     |   |
|---------------------|---|
| 1. Ctrl + X = Cut   | 4. Ctrl + Z = Undo last action            |
| 2. Ctrl + C = Copy  | 5. Ctrl + Y = Redo last action            |
| 3. Ctrl + V = Paste | 6. Ctrl + Shift = Toggle between drawings |

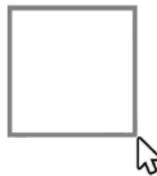
## ACTIVATION / DE-ACTIVATION OF TOOLS

1. Select tool > use tool > tool will be active until you press ESC to complete tool
2. Hit ENTER to re-activate tool and de-activate once previously selected
3. Finished a Command by clicking ESC (sometimes twice)

## OBJECT SELECTION

### Window selection

Object only becomes selected once entirely inside the window selection  
>Click and drag from the top left corner to the bottom right corner, selected objects become blue



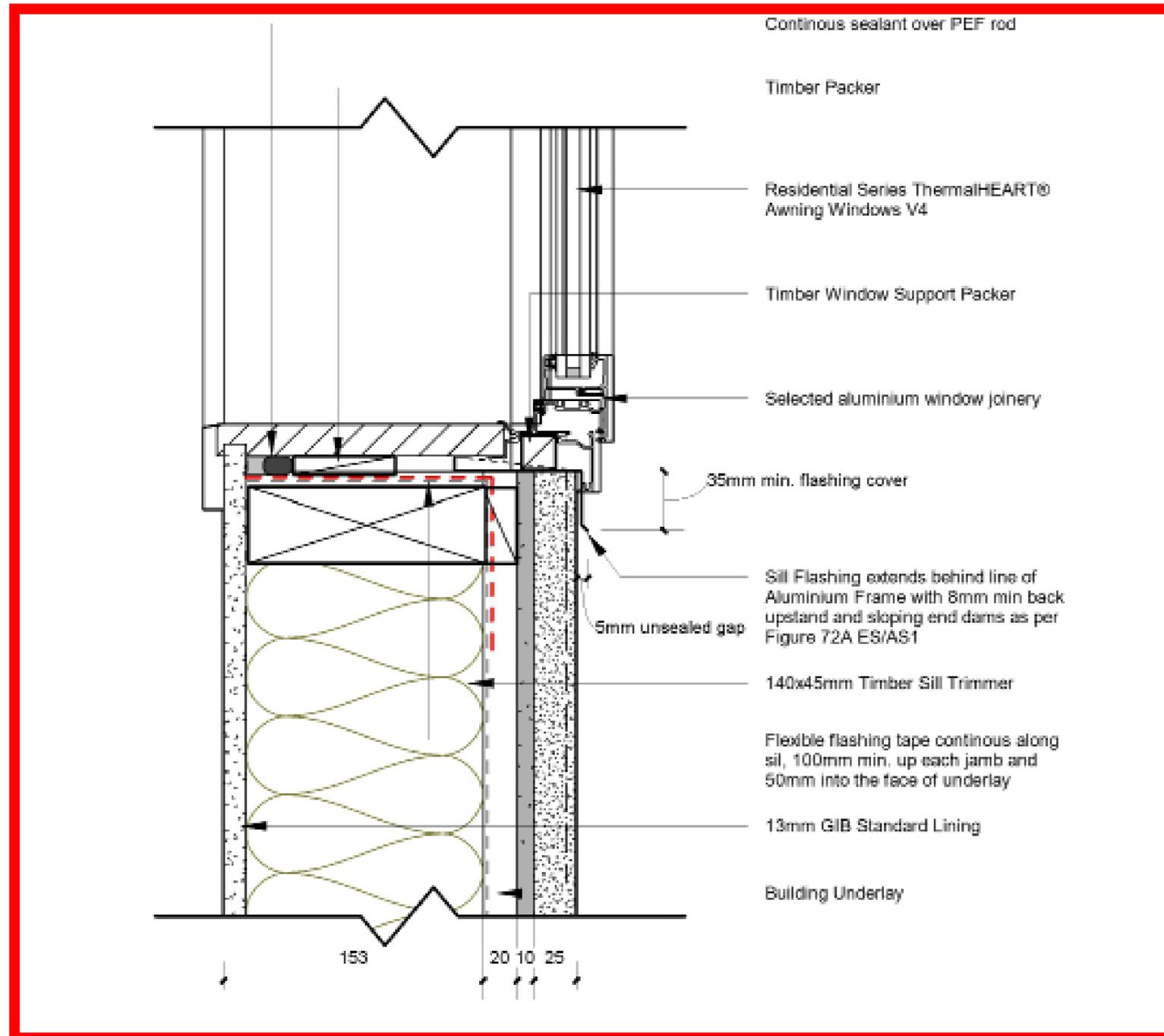
### Crossing selection

Objects become selected once the object touches the crossing selection  
>Click and drag from the bottom right corner to the top left corner, selected objects become blue



# Final Window Detail Outcome

Out aim is to create the following detail:



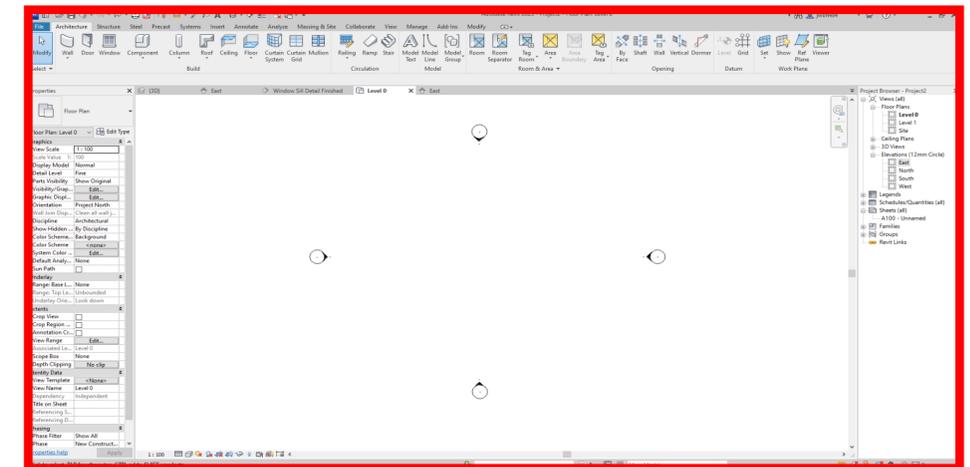
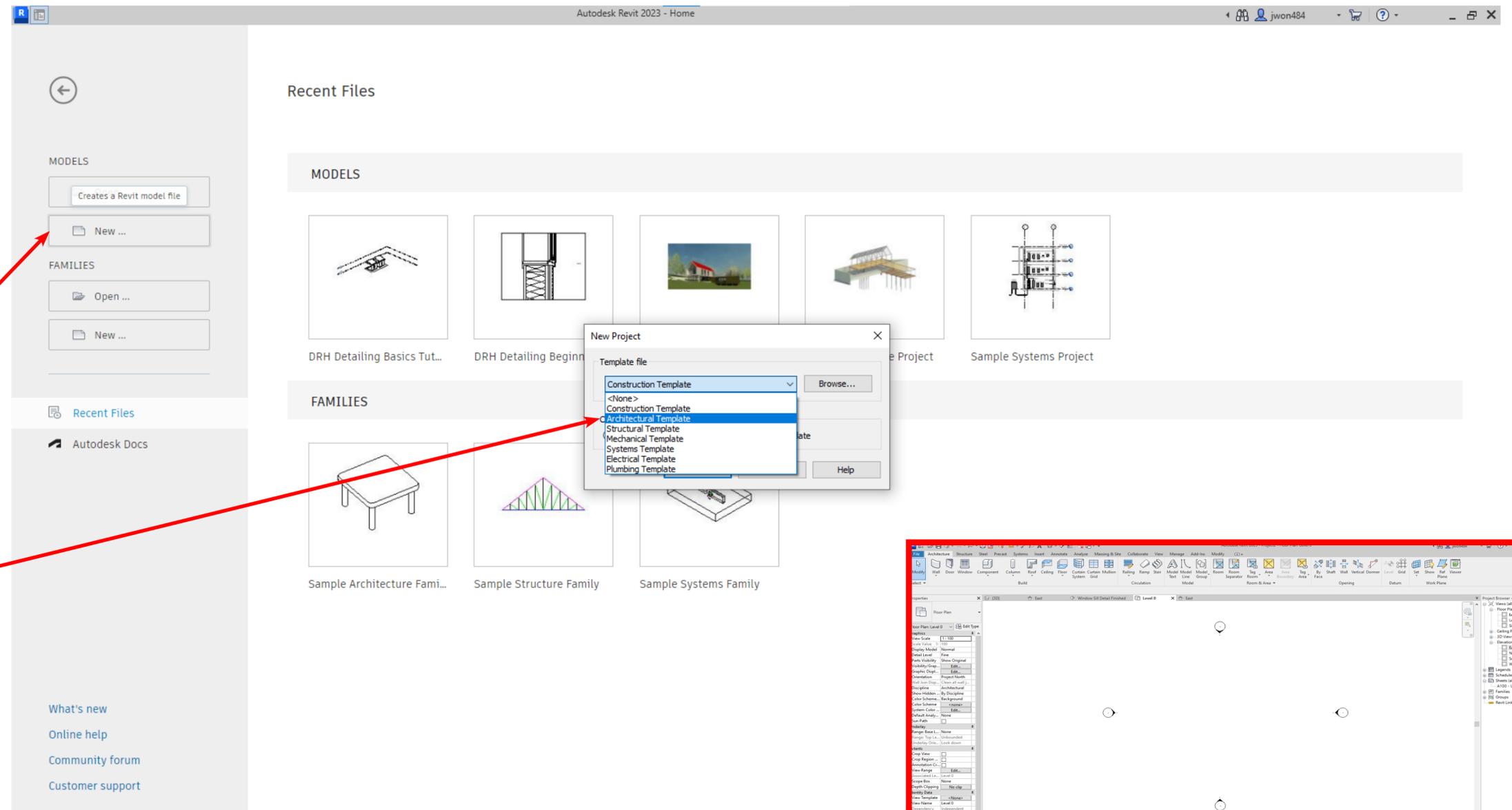
# Starting the project

1. Load up Revit 2023

2. Before starting a new project, make sure that you have installed Autodesk Revit **NZ** 2023 content. This can be found here: <https://www.autodesk.com/support/technical/article/caas/tsarticles/ts/5lnBwHsSn1OTRqm1EwYZZ5.html>

3. Under 'MODELS' select new → a new window should pop up

4. Under template file select **"Architectural Template."**

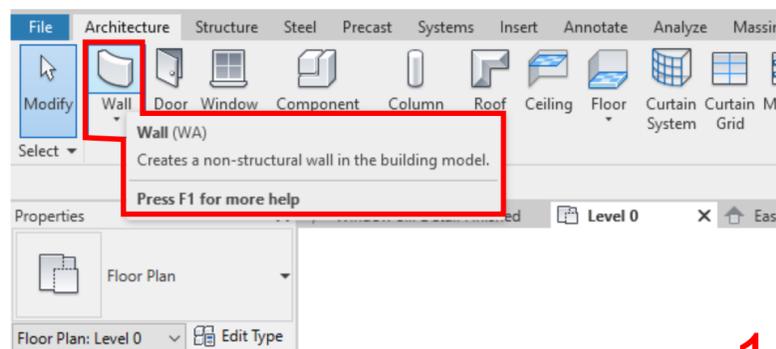


# Modelling a basic house: Walls

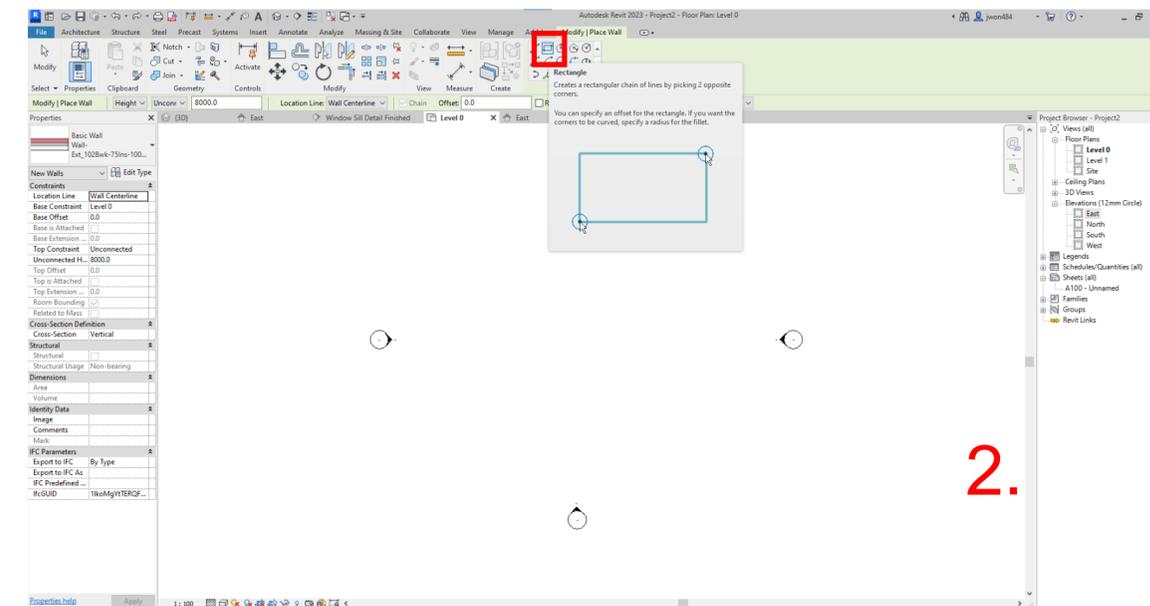
1. We will begin by modelling a basic home → make sure you are on level 0 view.

2. Select Wall (WA) tool → click once, drag and click again → select ALL walls by hovering over mouse and hitting the **Tab** key → once all selected under the 'properties' menu change 'top constraint' to level 1, this will change the height on the walls to what 'level' 1 height is set to. In this case it is **4000mm**.

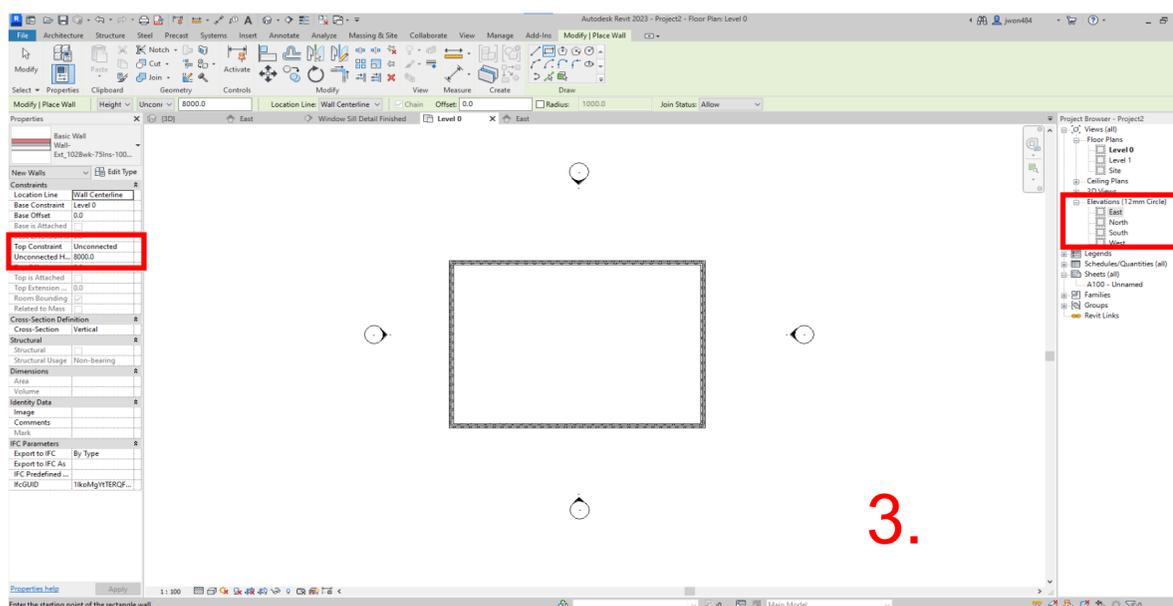
3. You can change the height by going to any Elevation view under 'project browser' → clicking the level head & changing to desired height.



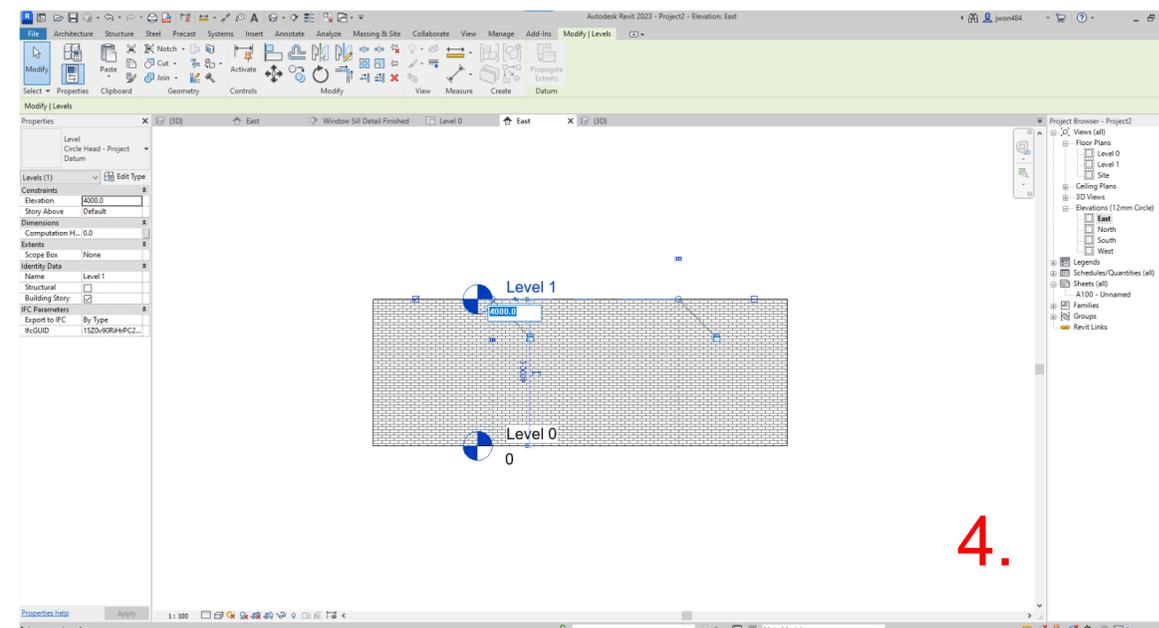
1.



2.



3.

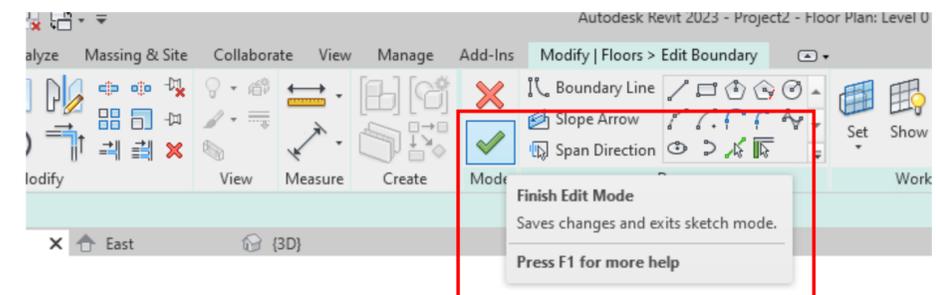
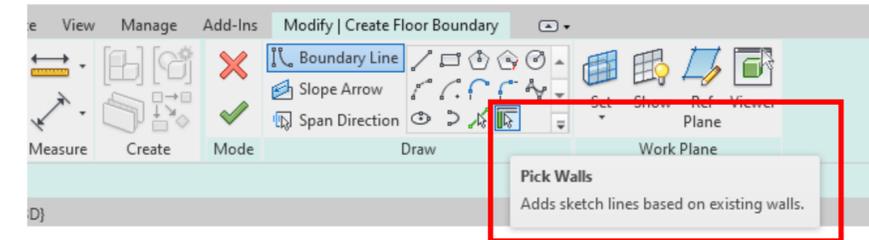
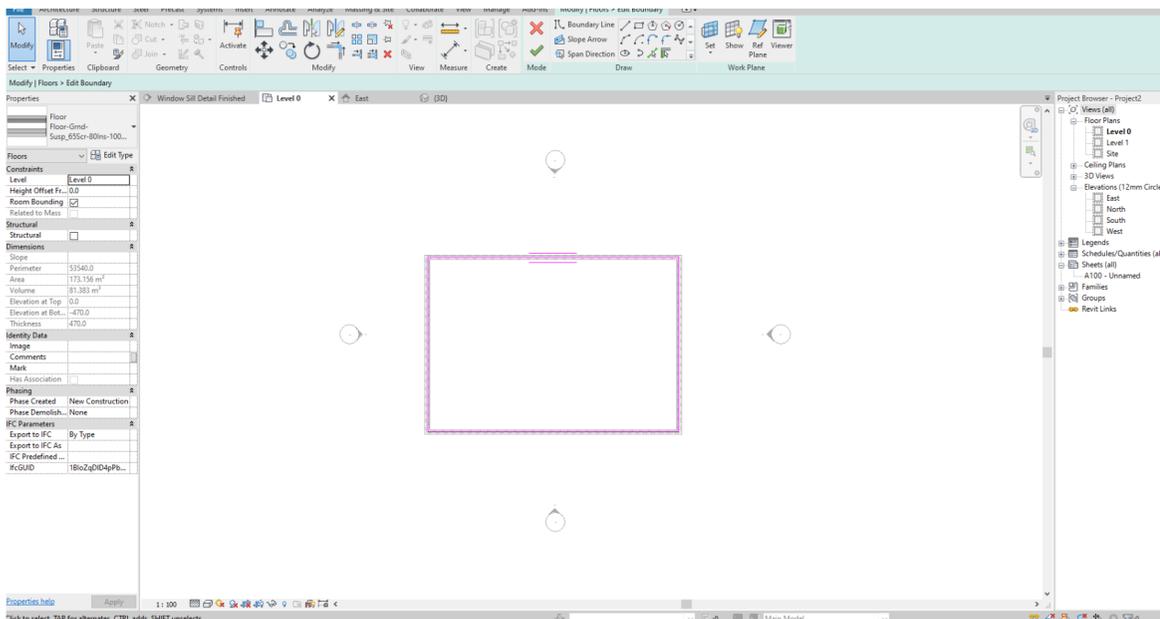
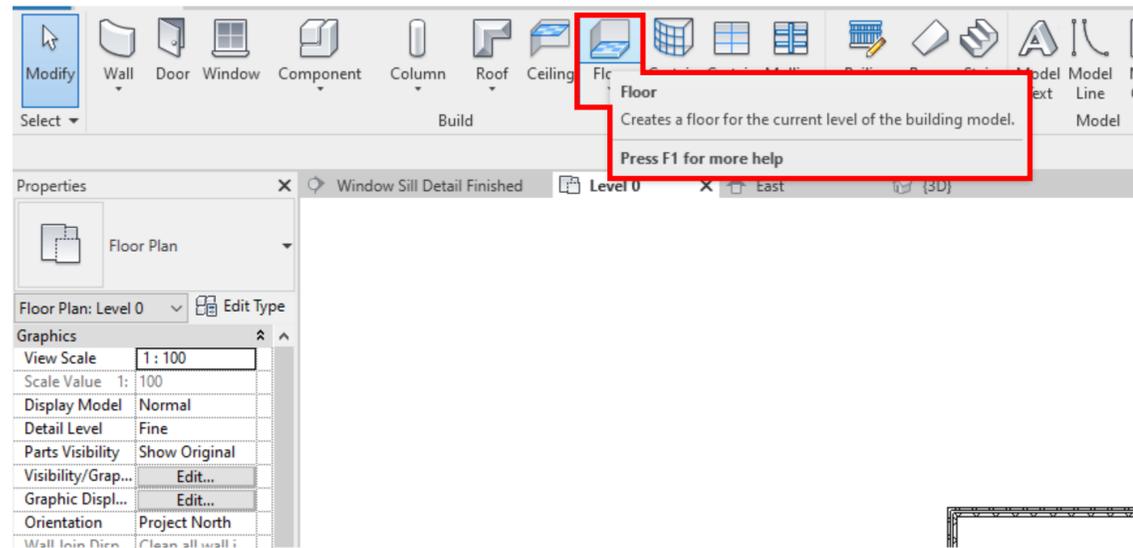


4.

# Modelling a basic house: Floors

1. Back in Level 0, we will draw in our floor.

2. To do this, click on the Floor tool → with picked walls selected click on the four walls → then Finish to complete.



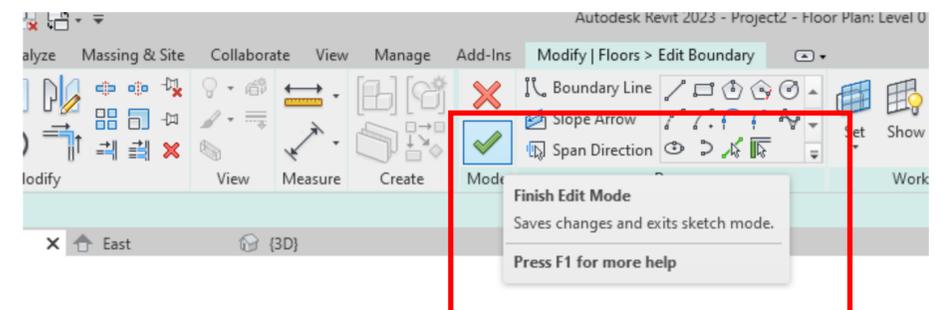
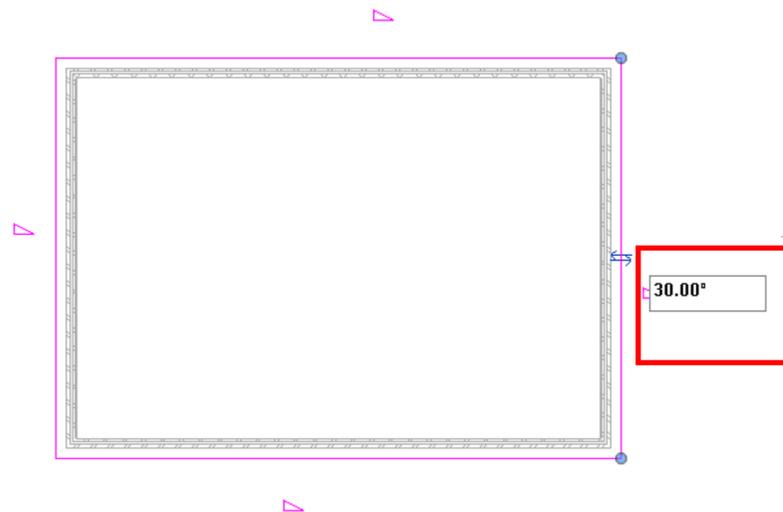
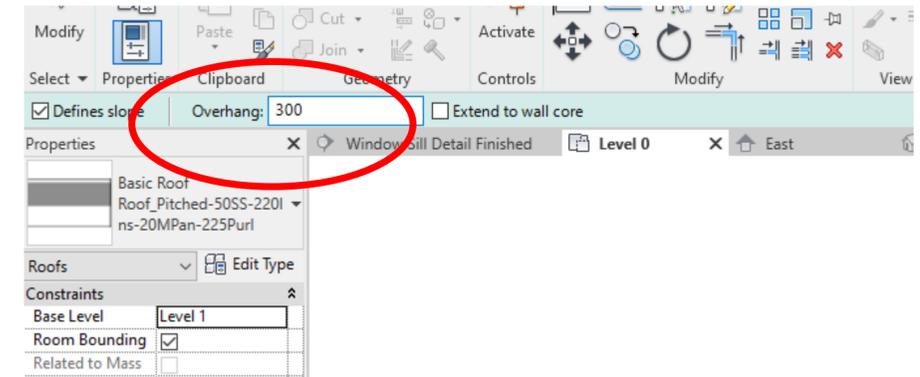
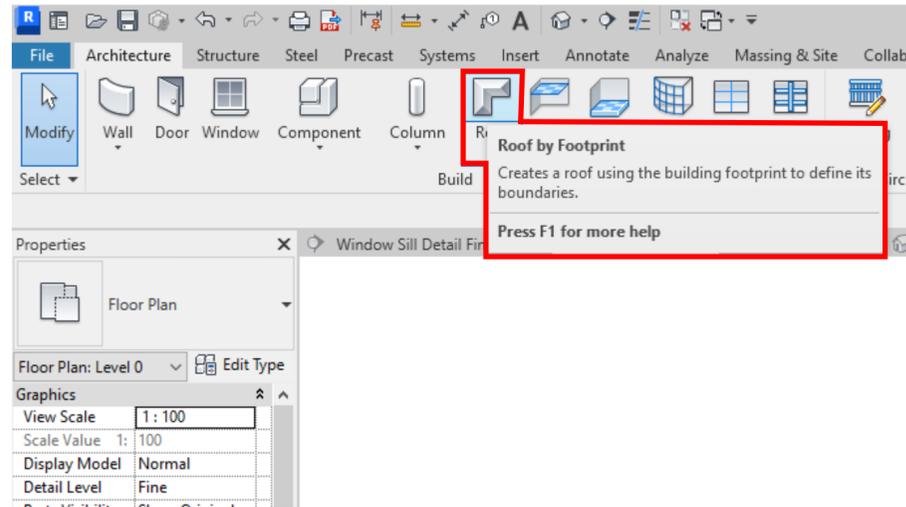
# Modelling a basic house: Roof

1. Staying in the Level 0 plan view, we will draw in our roof.

2. To do this, click on the Roof tool → as we are on level 0, a pop up will occur → click 'yes'

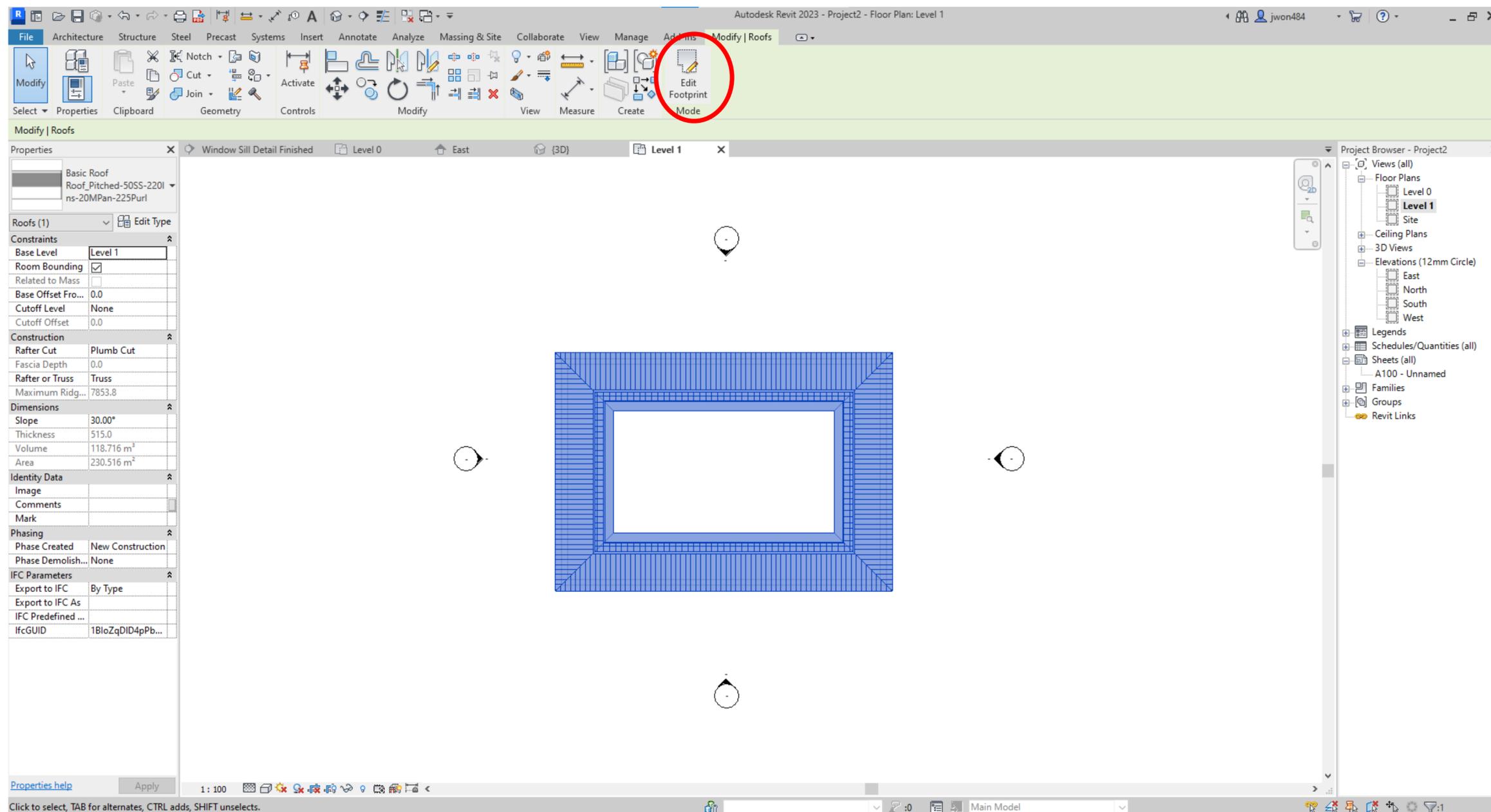
3. With picked walls selected and overhang set to 300, click on the four walls

4. Change the roof slope by clicking on the 30 next to the triangle → change to 12 and click complete.



# Modelling a basic house: Edit Footprint

\*\*You can change the roof/floor at any time by selecting the roof/floor and clicking “edit footprint”

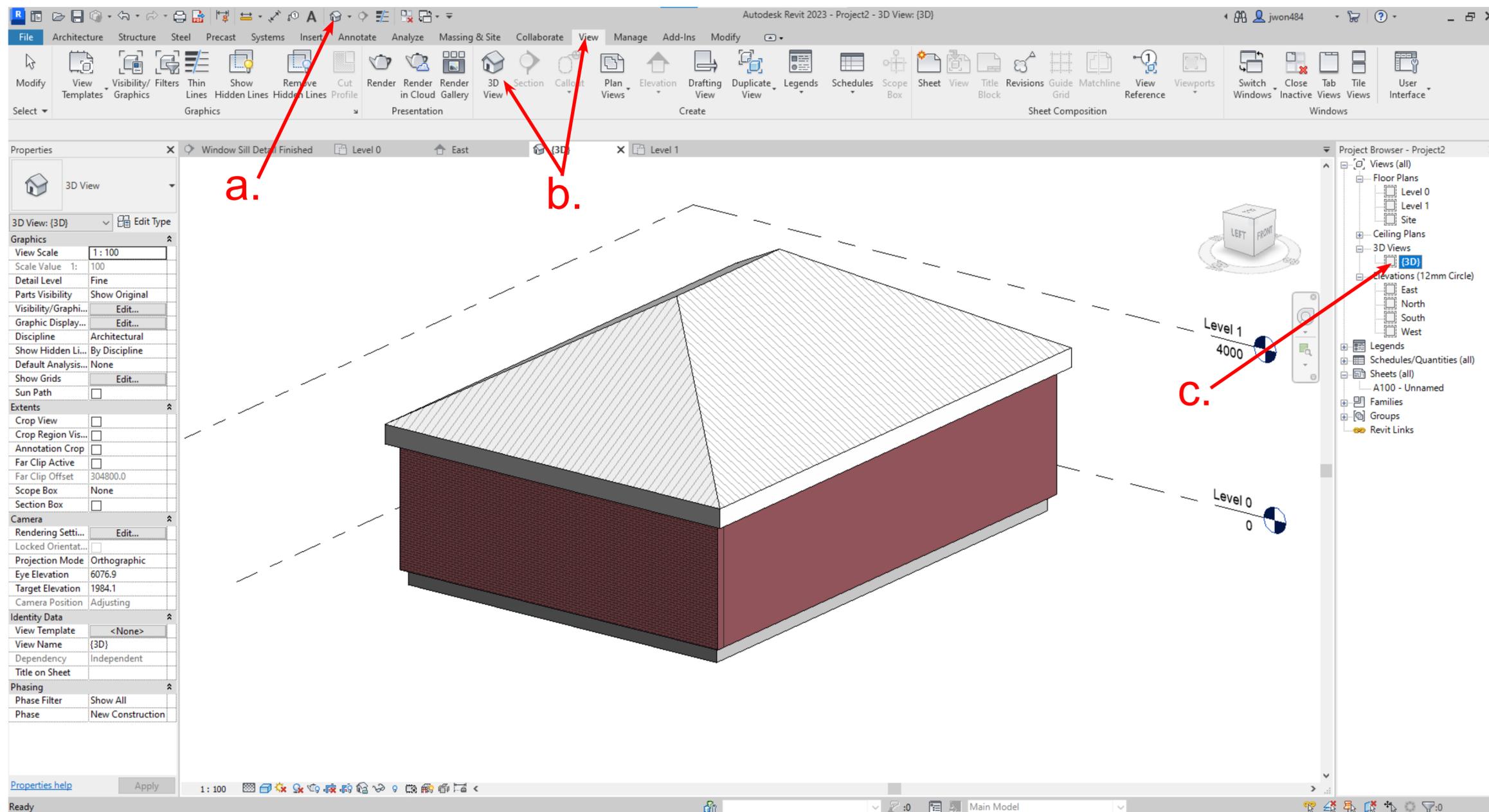


# Modelling a basic house: 3D View

1. By now you should have completed a basic 3D model of a rectangular house. You can view this in 3D by going to 3D view

2. There are **three** ways to access this view:

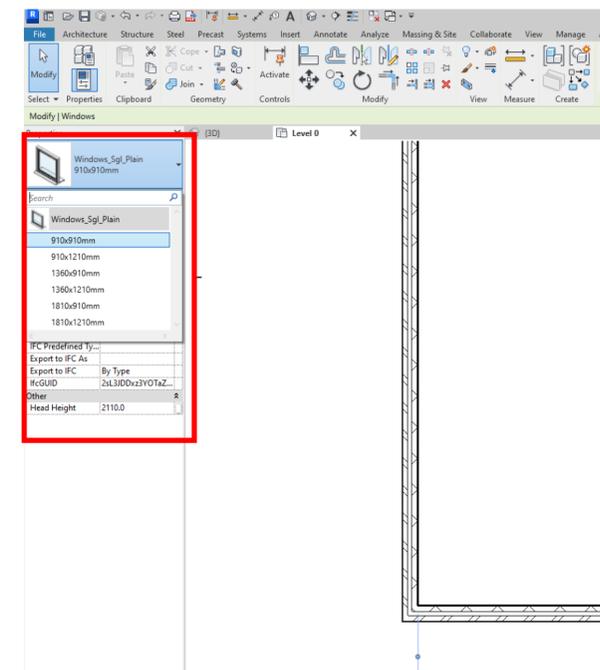
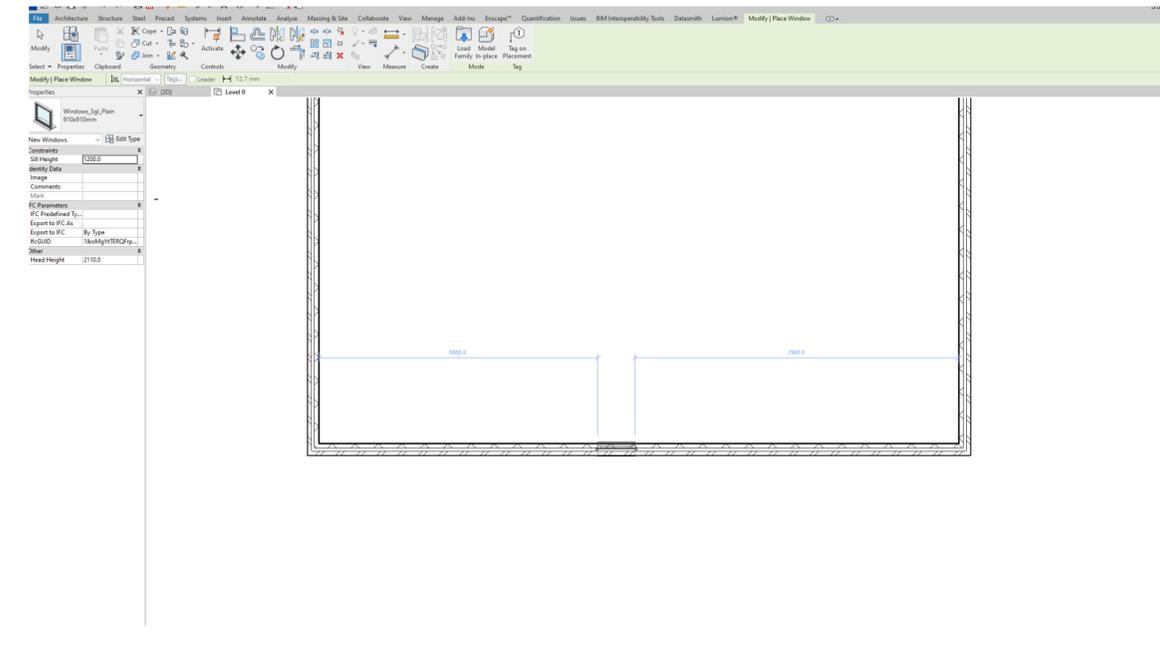
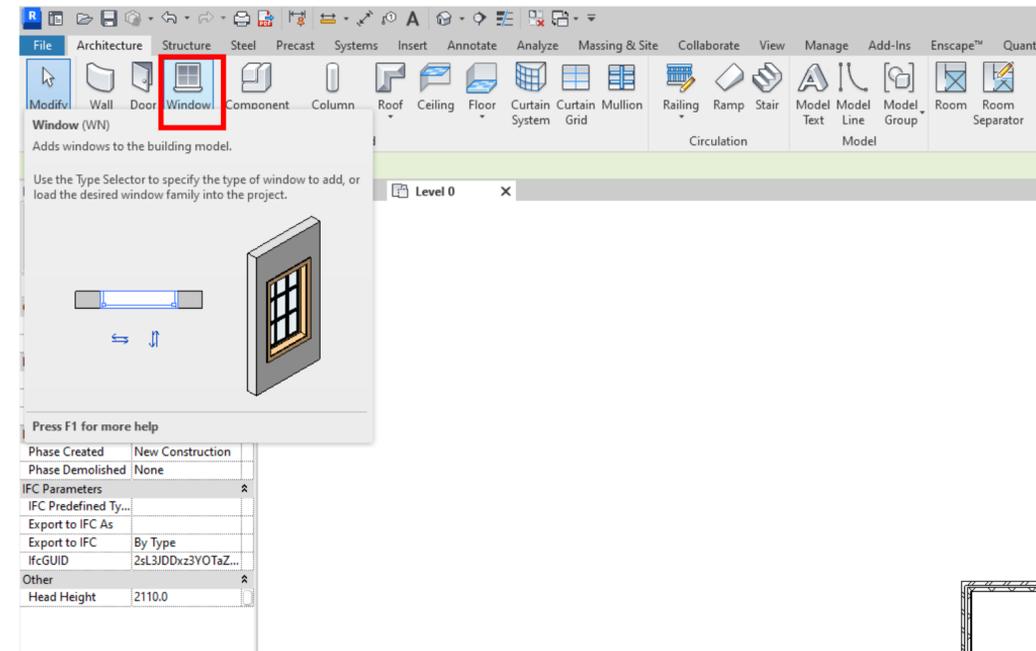
- a. Quick Access Toolbar
- b. View → ‘3D view’
- c. Project browser → {3D}



# Modelling a basic house: Insert Window

1. Back in Level 0 plan view, we will insert a window → under Architecture tab, click on 'window.' The window selected is a default revit window → hover over wall and place.

2. To change the window size, with the window selected, click on the 'type selector' → drop down menu will pop up with other sizes to choose from → click on any other dimension and the window size will change.



# Loading in a Revit family: Window

1. To load in a family downloaded online, you must first make sure of the type of asset. Eg. You can only load windows from the window from the windows tab. For detail components, you must load them from, annotate → component.

2. To load the window, click on window → then navigate to 'load family' → navigate to file location (in this case downloads folder) → click and select open → you can now find it in the windows tab → select original window and change to imported window.

3. This was downloaded from APL windows from Eboss. More components/families can be found online at:

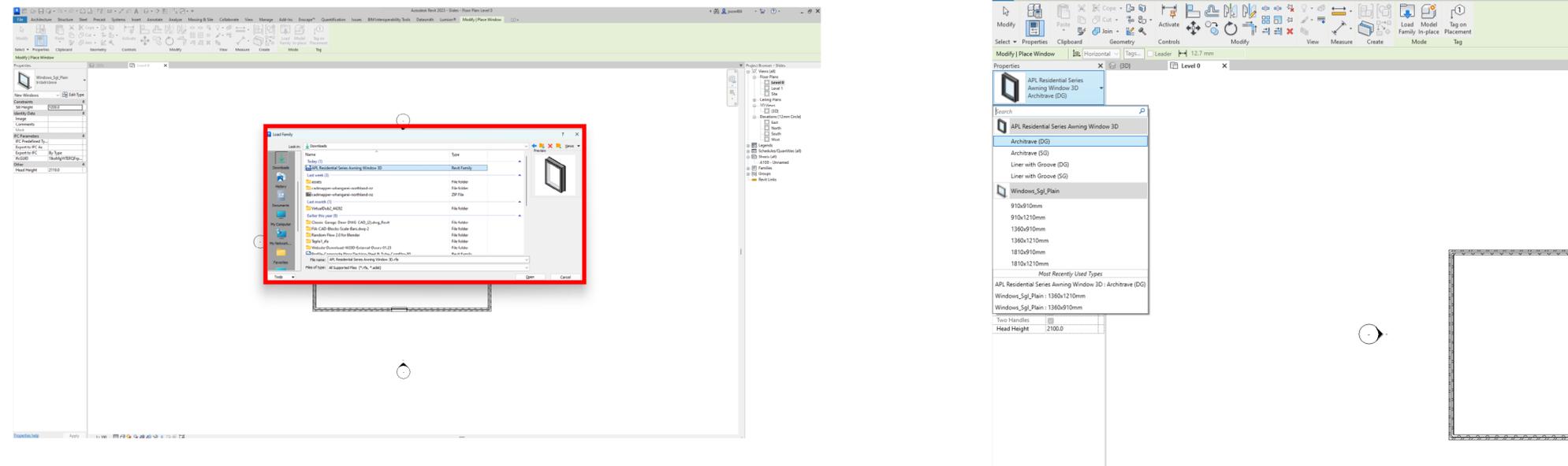
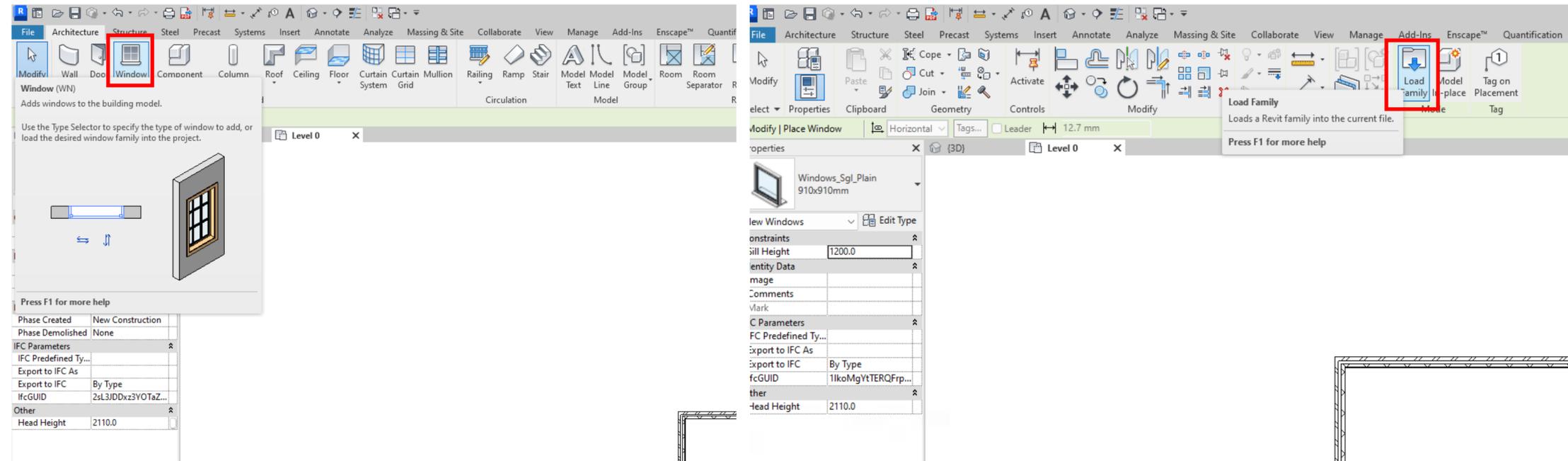
**Revitcity** – <https://www.revitcity.com/index.php>

**Bimobject** – <https://www.bimobject.com/>

**Bimstore** – <https://www.bimstore.co/search>

**Polantis** – <https://www.polantis.com/>

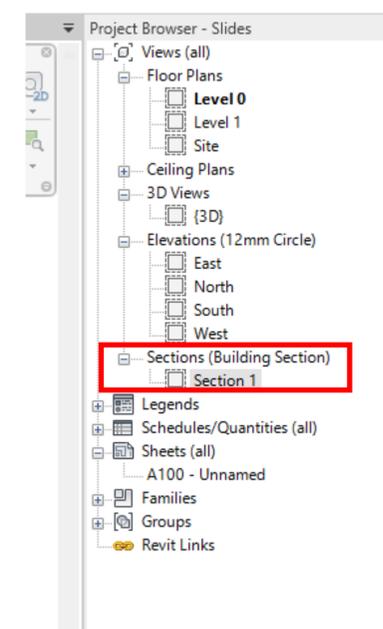
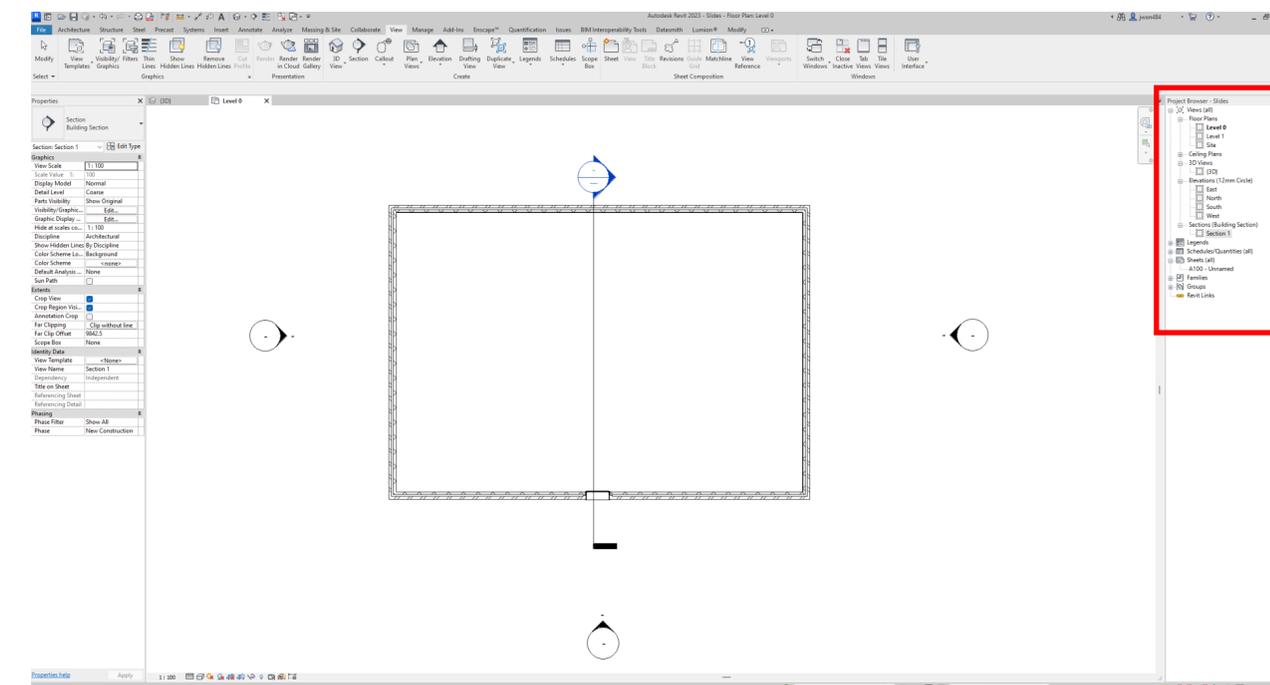
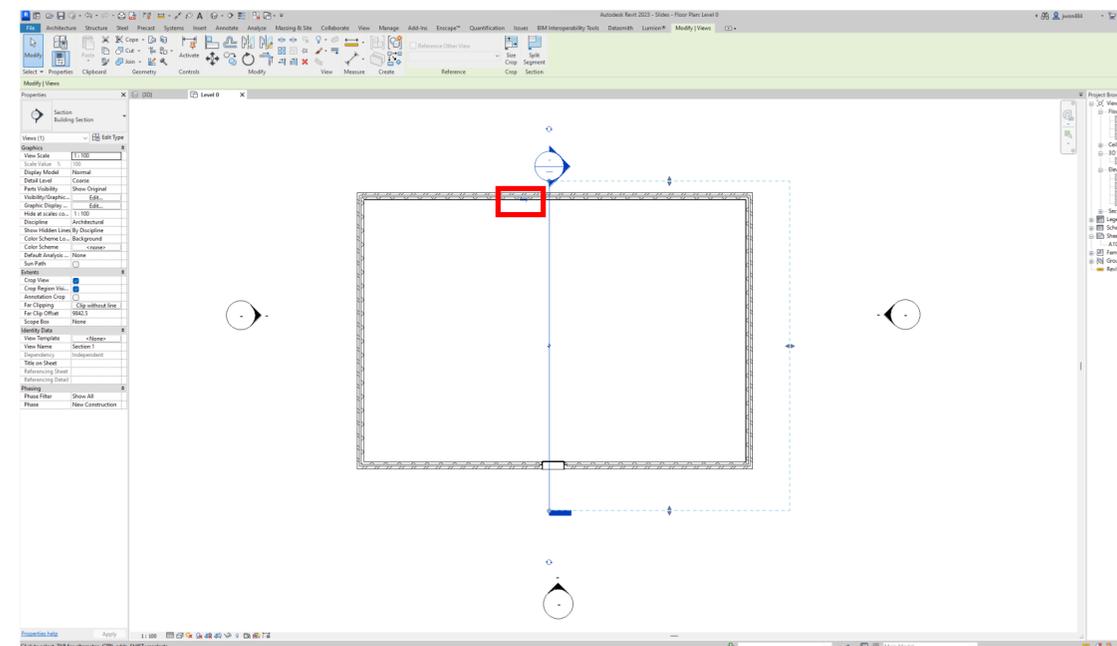
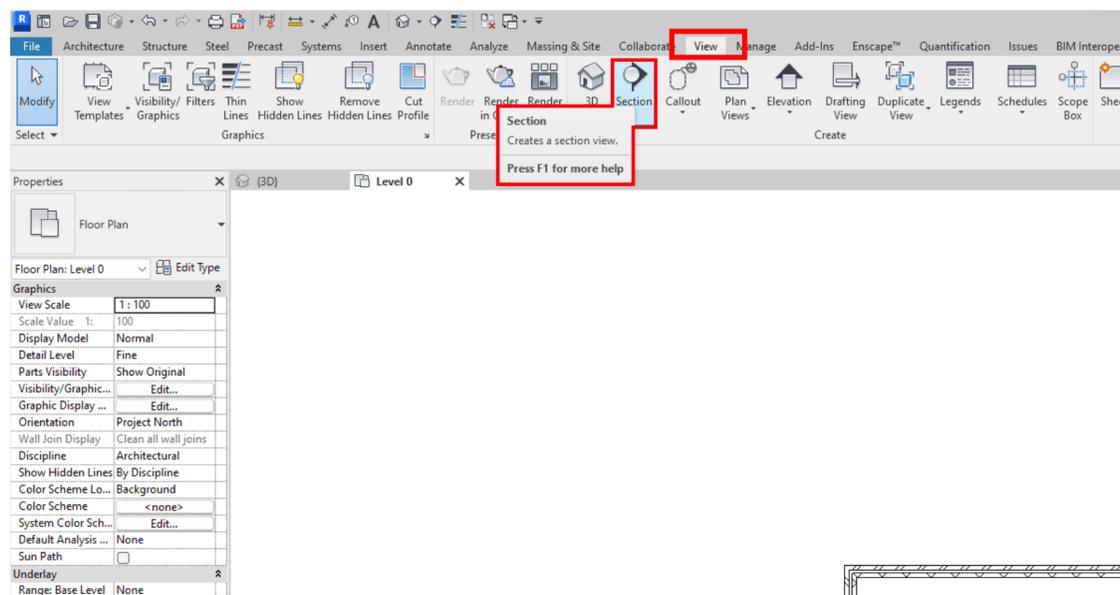
Or on manufacturers websites.



# Creating a detail: Section View

1. Back in Level 0 plan view, create a section view → under view tab, click section → click once to create, click again to place → we will place it in the middle of the window → you can flip the section by clicking on the back/front arrow.

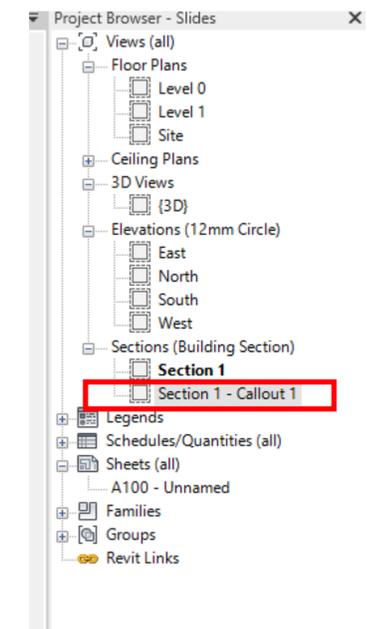
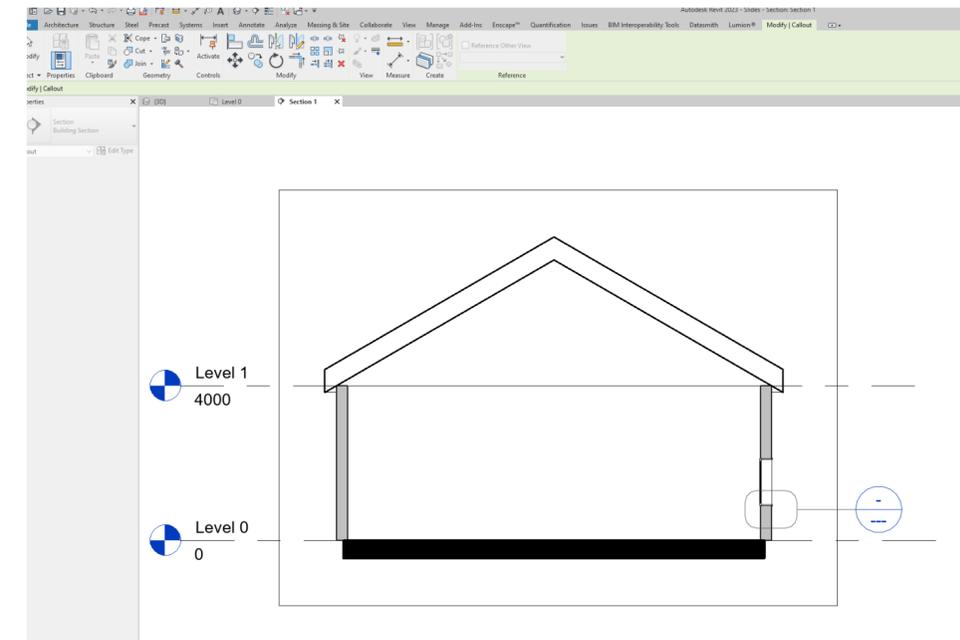
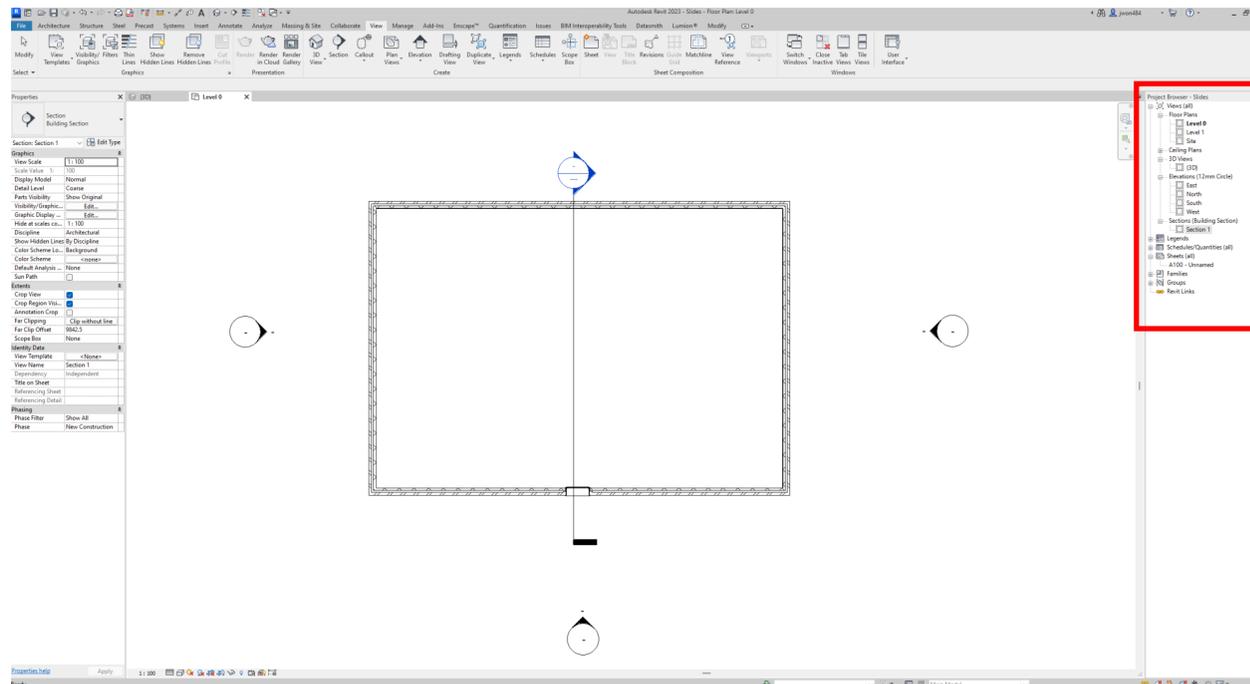
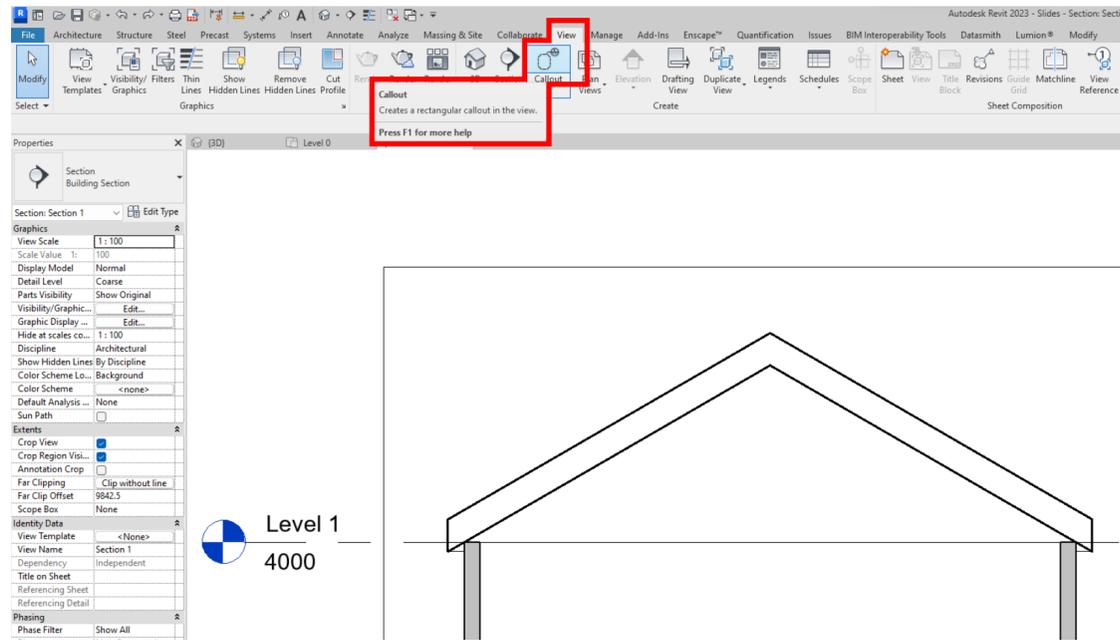
2. To go into the section view in project browser, a new sections tab will be created → click on the + icon → by default the section created will be named “section 1” → double click to go into view.



# Creating a detail: Detail View

1. Once you are in the section view, create a detail view → again in view tab, click on 'callout' → create a sill callout, click once, drag and click again to complete

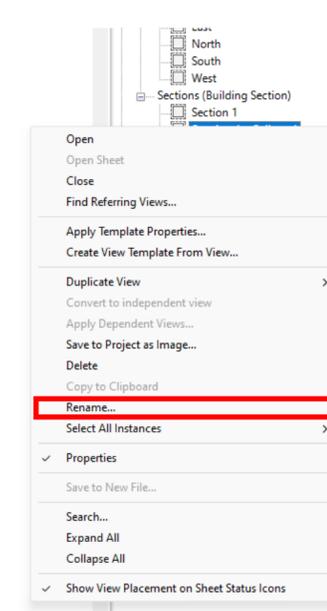
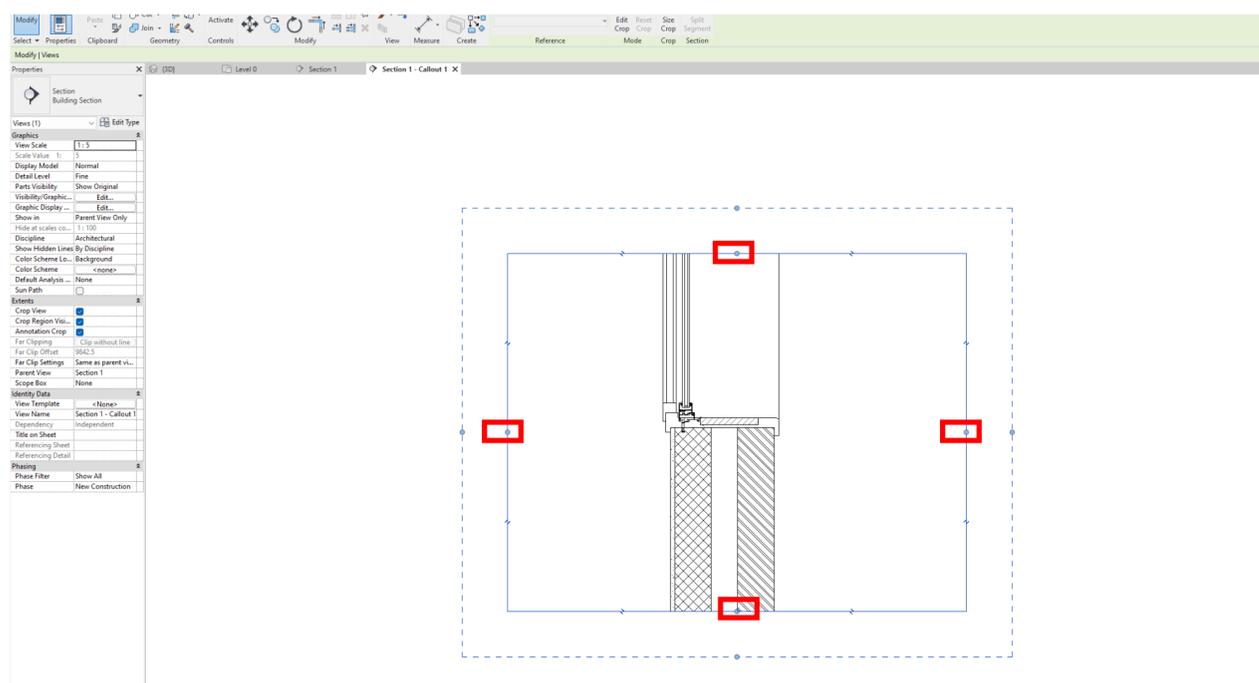
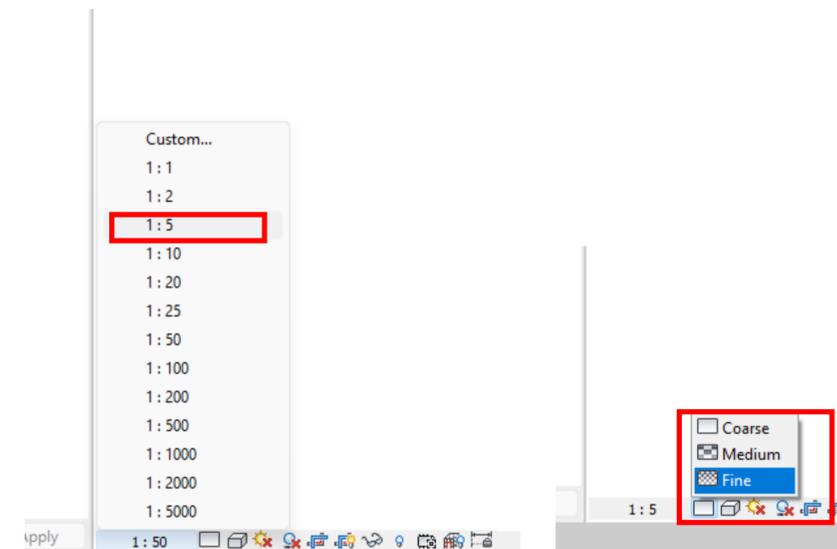
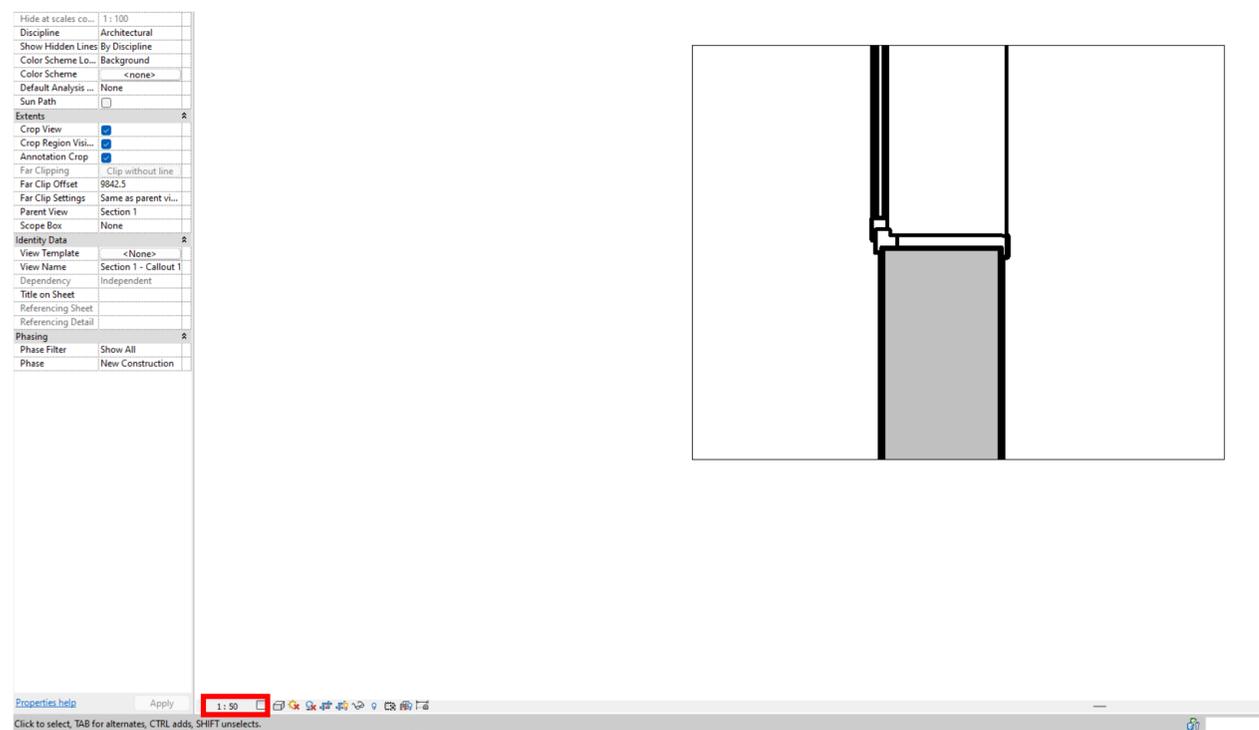
2. To go into the detail view in project browser, a new sections tab will be created → by default the callout created will be named "Section 1 - Callout 1" → double click to go into view.



# Creating a detail: Detail View

1. Once you are in the detail view change both the scale and detail level → in the view control bar set scale to 1:5 → set detail level from coarse to fine.

2. Change the detail border by dragging the circle control points → rename by right clicking on name, and clicking 'Rename...'



# Detailing: Changing wall structure

1. Assuming our wall is a timber framed

construction with the following:

- Stucco Plaster wall (25mm)
- Slip Layer (0.3mm)
- Rigid backing board (10mm)
- Drainage Cavity (20mm)
- Air control layer/Building Underlay (0.3mm)
- Timber Structural Stud with Insulation and dwangs (140mm)
- Interior Plasterboard Lining (13mm)

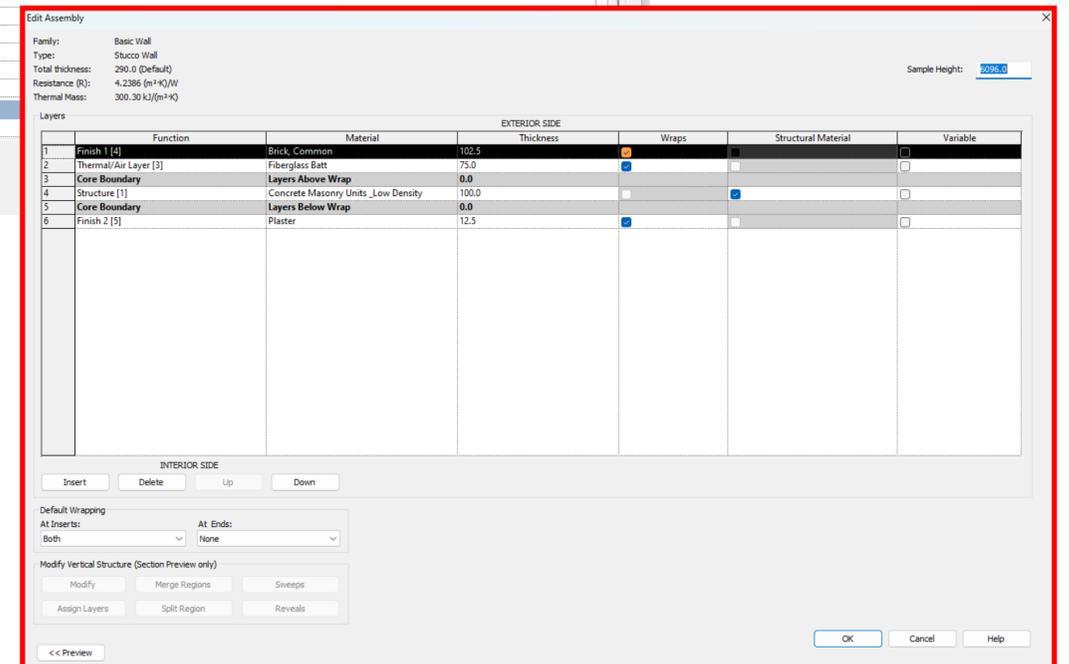
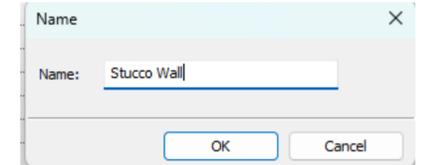
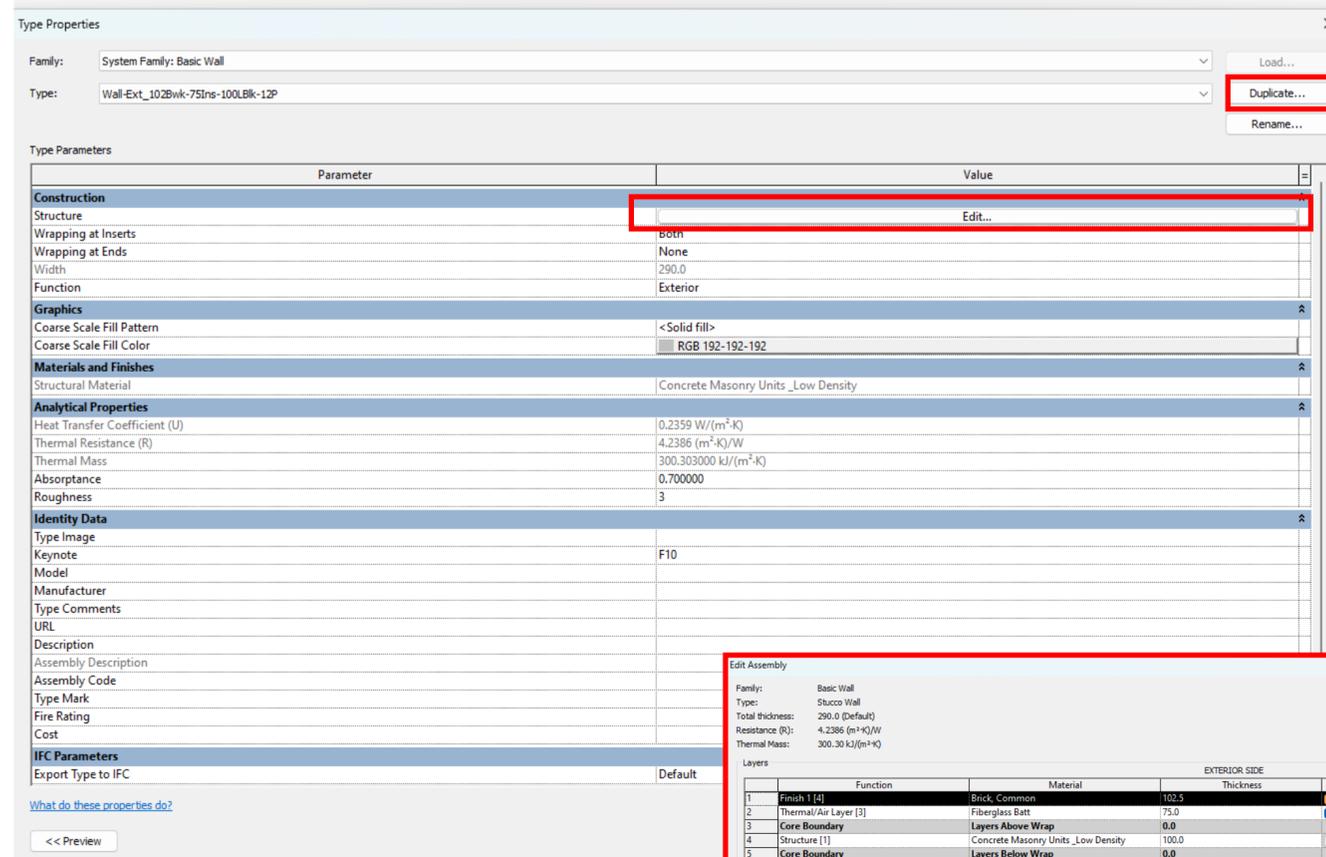
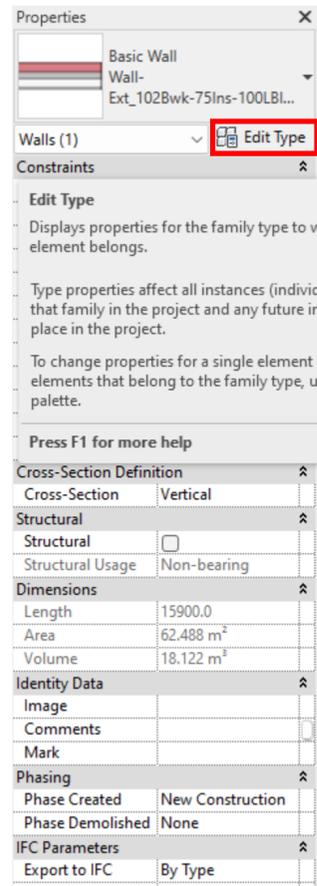
2. To create this wall, select wall →

under properties, edit type → duplicate

and name → under structure select

'edit' → this will bring us to the edit wall

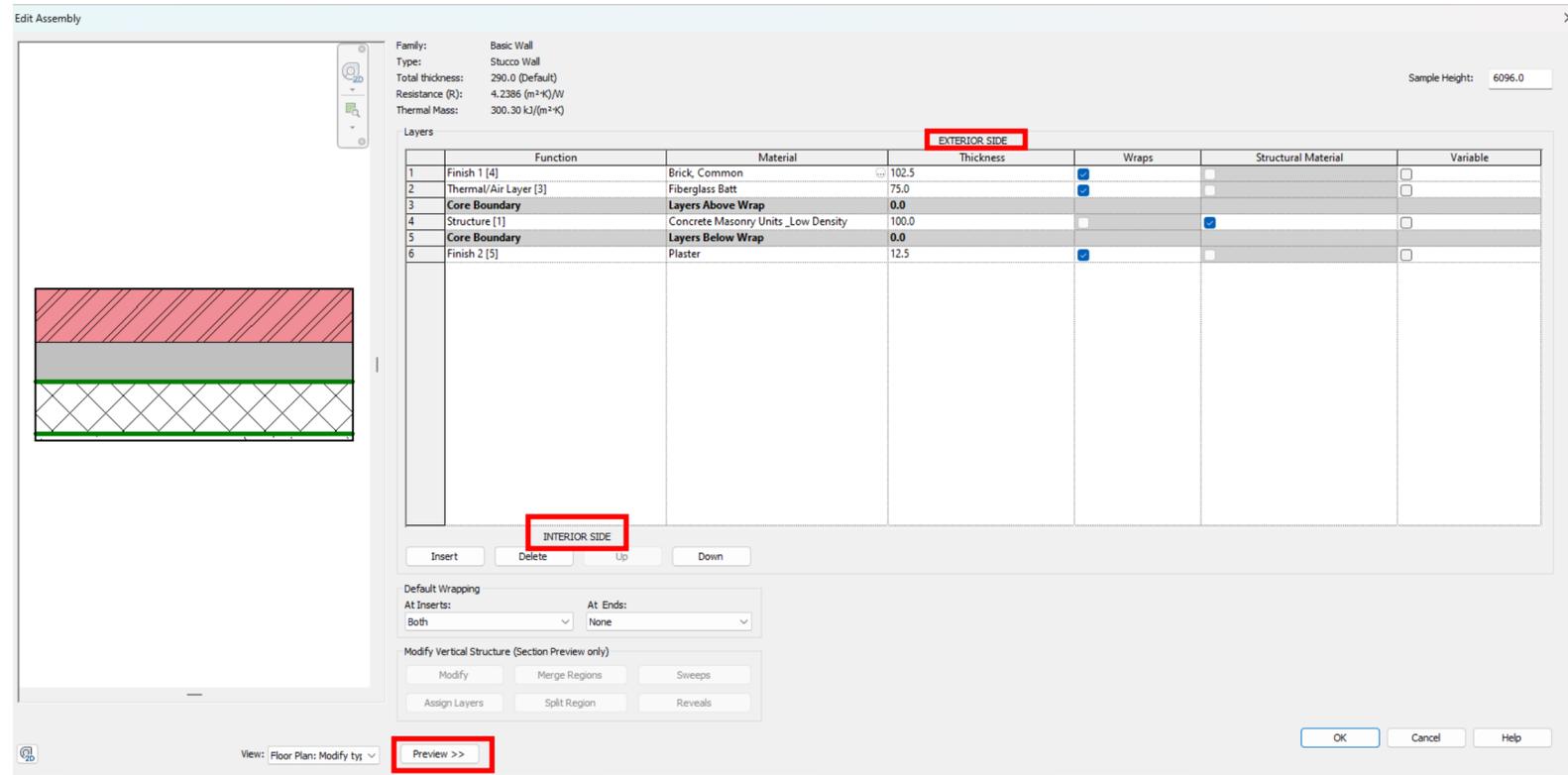
assembly page



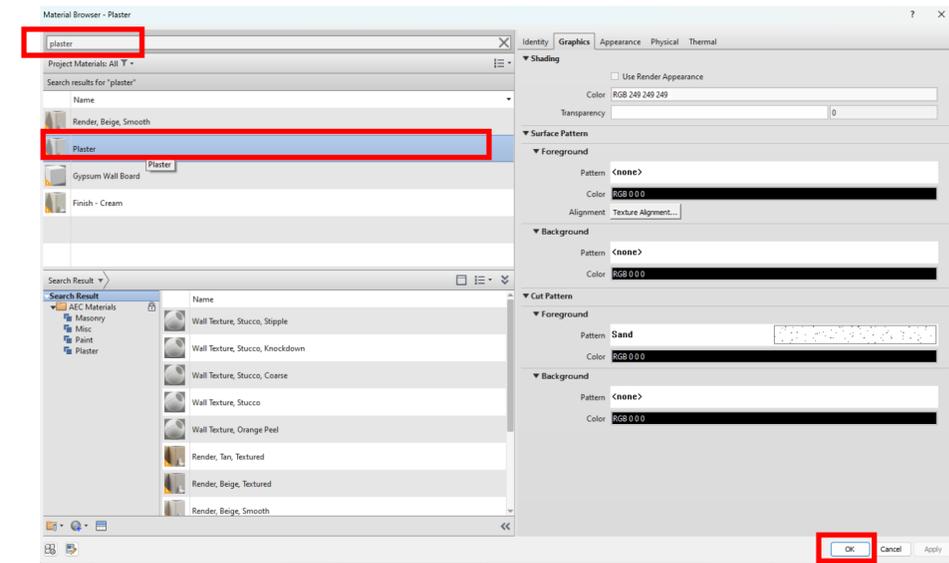
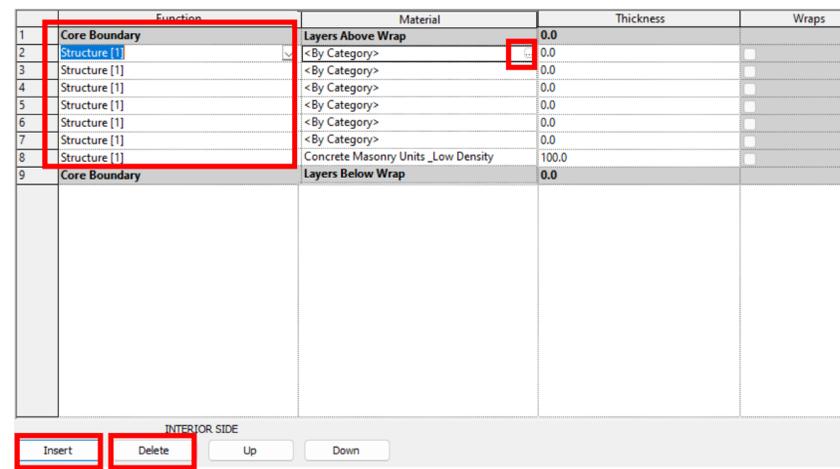
# Detailing: Changing wall structure

1. Following the wall construction, we will create the wall assembly, top being the exterior and bottom the interior:

- Stucco Plaster wall (25mm)
- Slip Layer (0.3mm)
- Rigid backing board (10mm)
- Drainage Cavity (20mm)
- Air control layer/Building Underlay (0.3mm)
- Timber Structural Stud with Insulation and dwangs (140mm)
- Interior Plasterboard Lining (13mm)



2. Press 'Preview' to view wall construction → delete all layers until only structure is left → insert 6 more layers → change boundary to selected type → enter correct widths → change materials by clicking on three dots, window will pop up search for material and select → click 'ok' to finish.

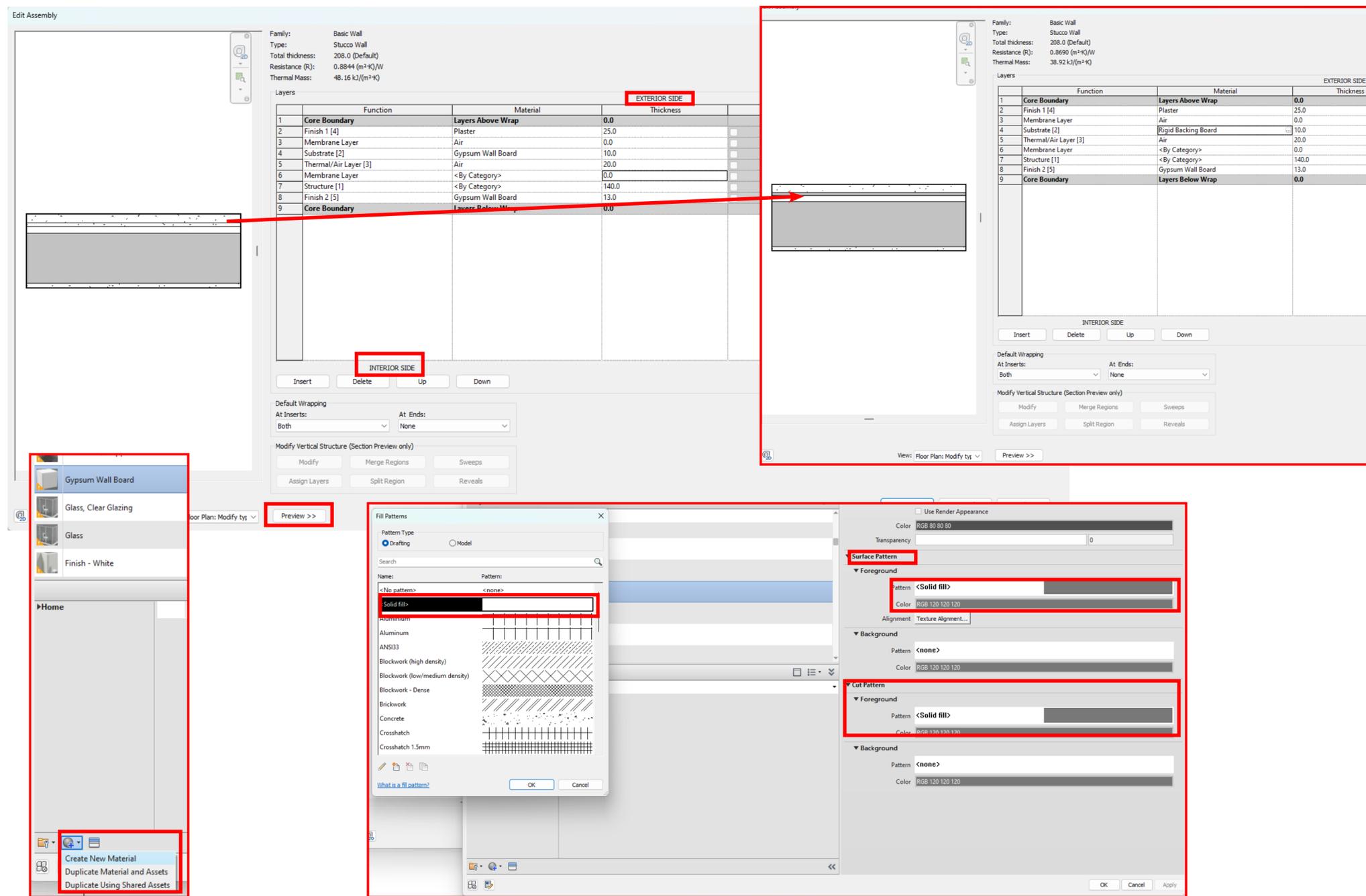


# Detailing: Changing wall structure: Creating Custom material

1. After completion you should have a wall that looks like the following image.

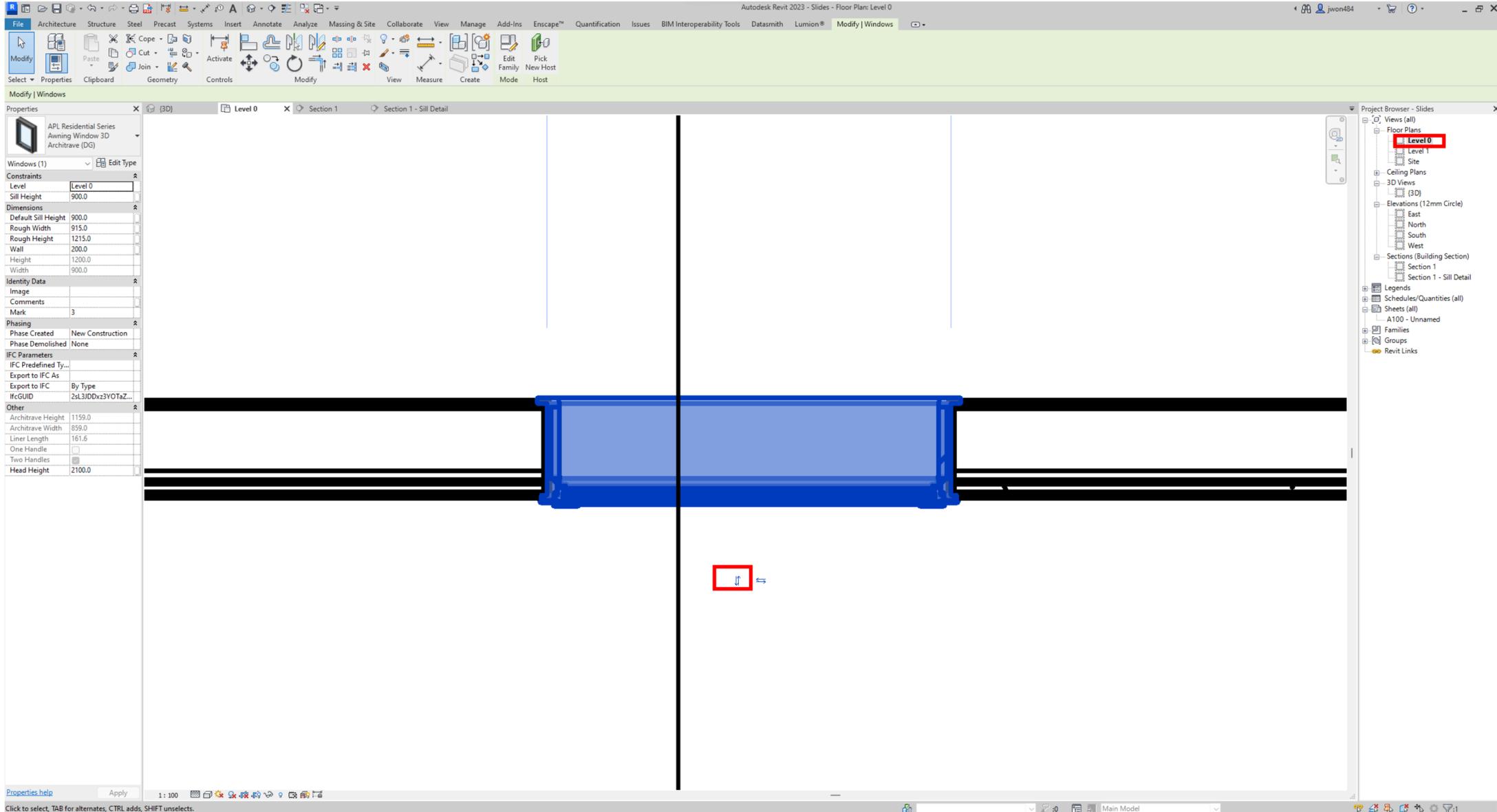
2. Sometimes there is no specific material, in this case we will make our own rigid backing board → navigate back to material window → bottom left, create new material → this will create new default material → left click, rename to 'rigid backing board' → under graphics change fill pattern for surface/cut pattern to solid fill, and leave colour as grey → this changes the material appearance, you can also add texture by changing fills etc, → click ok to finish.

3. Play around to create your own textures/colours/different wall assemblies!



# Detailing: Changing window placement

1. To Change window orientation, go to floor plan view → select window → flip window using arrows → making sure exterior of window is facing outwards



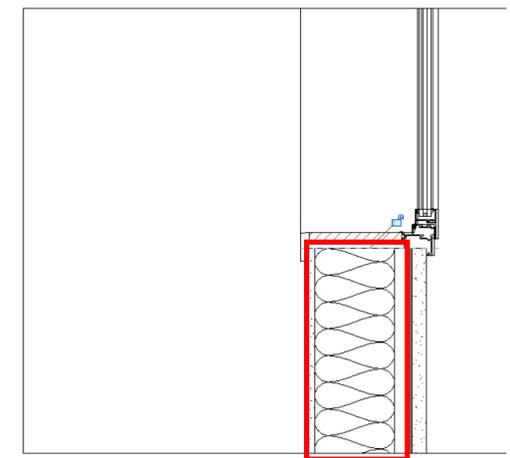
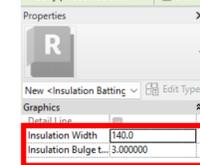
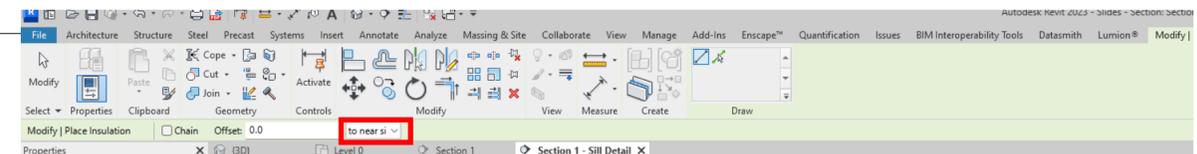
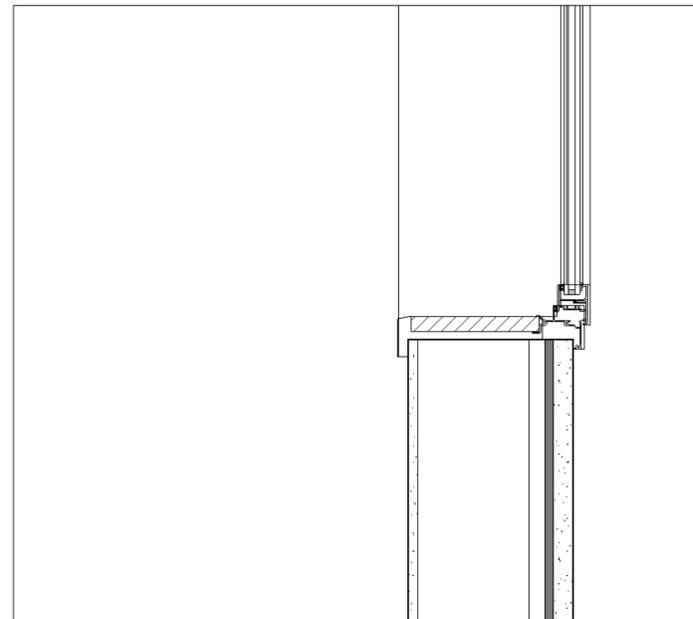
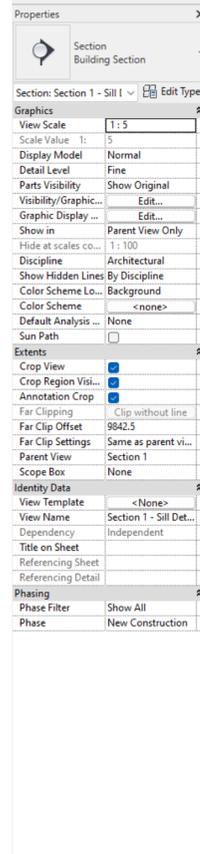
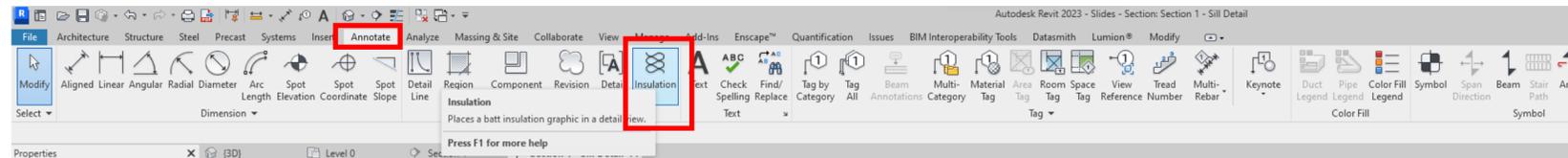
# Detailing: Adding Insulation

1. Back in detail view, we can add in our insulation → under annotate tab, click on insulation

2. When drawing select to near side/far side in the options panel, this will allow you to draw along a wall's face, instead of from centreline. Additionally, change the width from the default our desired width, in this case 140mm

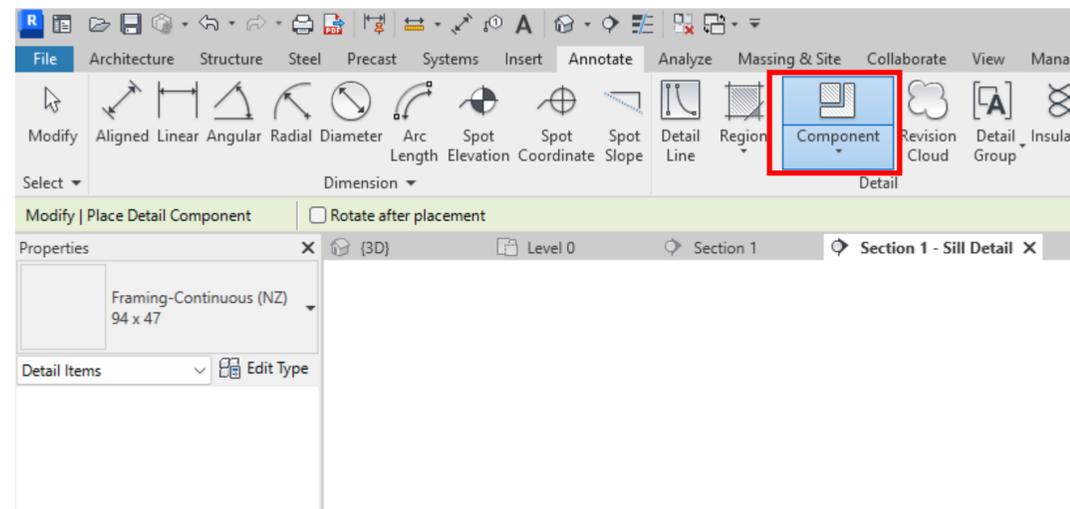
3. Click once, drag and click again to finish.

4. You can also change the bulge → the large the bulge, the more compact the insulation, vice versa.

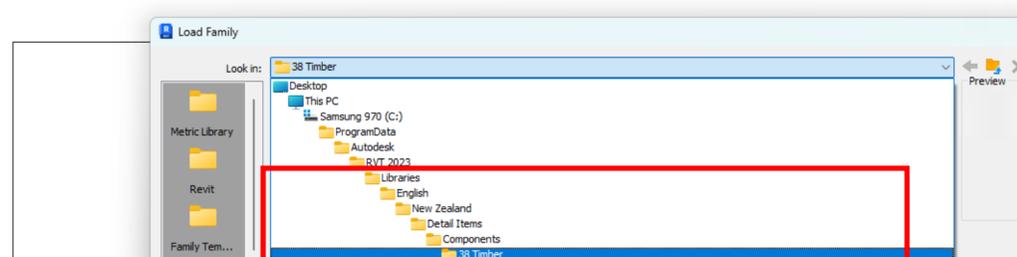
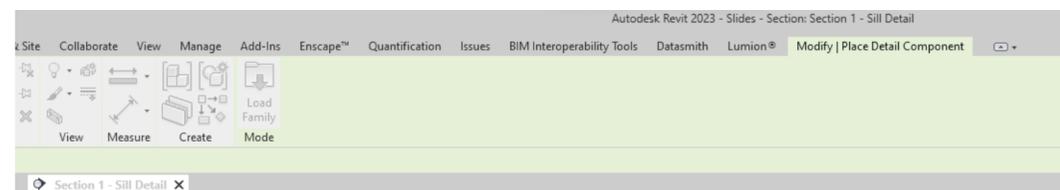


# Detailing: Detail Components

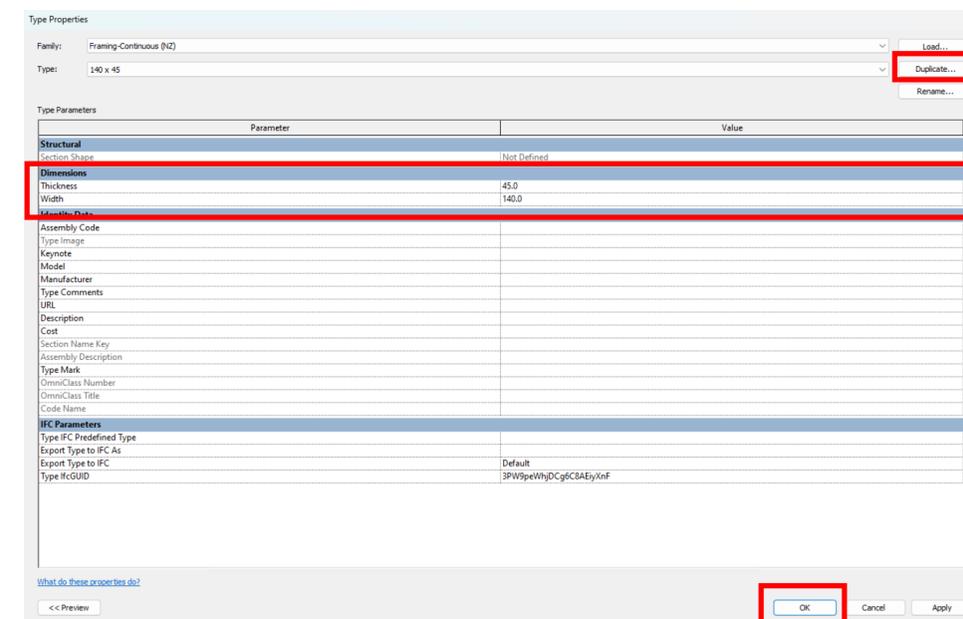
1. Now we will add in our detail components → under the annotations tab click Component > load family → New Zealand → Detail Items → Components → 38 timber → “Framing-Continuous (NZ).rfa”



2. Default size is 94x47, we need 140x45. Change this by going to properties and creating your own stud size → duplicate an existing type (so this does not interfere with the original file), rename and change the dimensions according to your own liking.



\*\*It is important to note the difference between the model components and the detail components. Model components are 3D whereas detail components are purely 2D ~ you will not be able to view in 3D view. Additionally, detailed components/ annotations only shown on the page you have drawn it on.



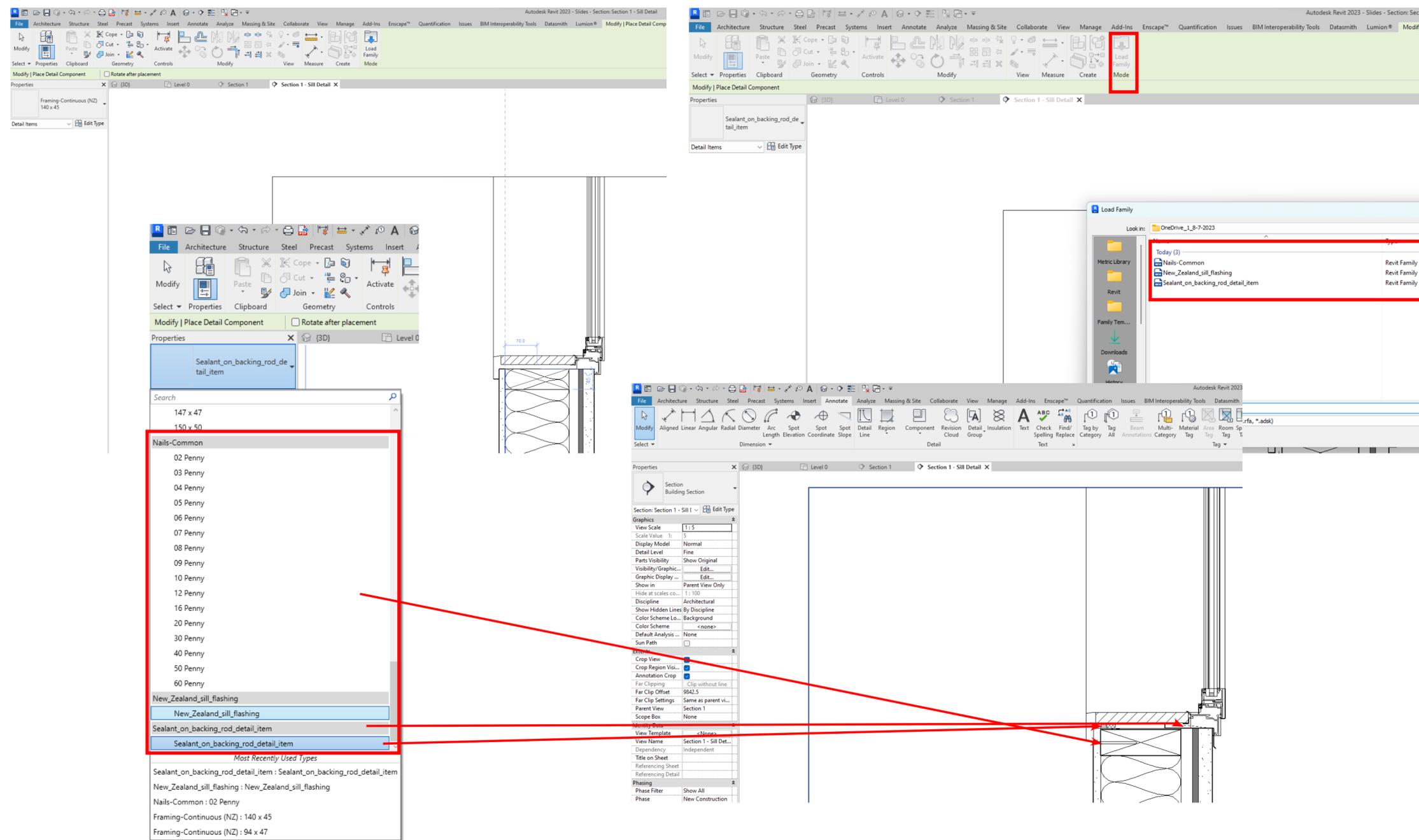
# Detailing: Detail Components

1. Left click to place the component → additionally, before placing press space to rotate the component → make sure to leave space between components when detailing

2. Repeat steps to load in other necessary components → again, if need you can creating your own custom sizes by duplicating the selected component. Otherwise resize with arrows provided.

3. Select components by clicking on the type selector and selecting the necessary components.

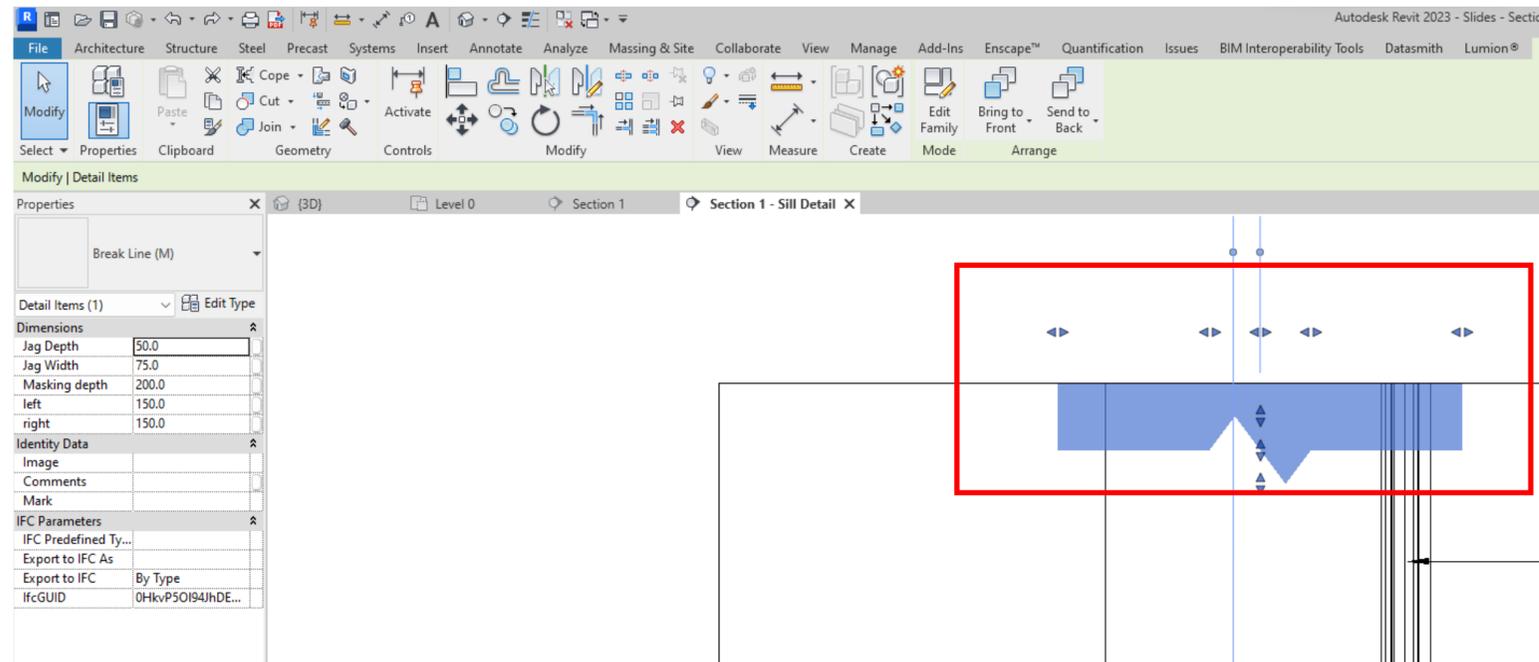
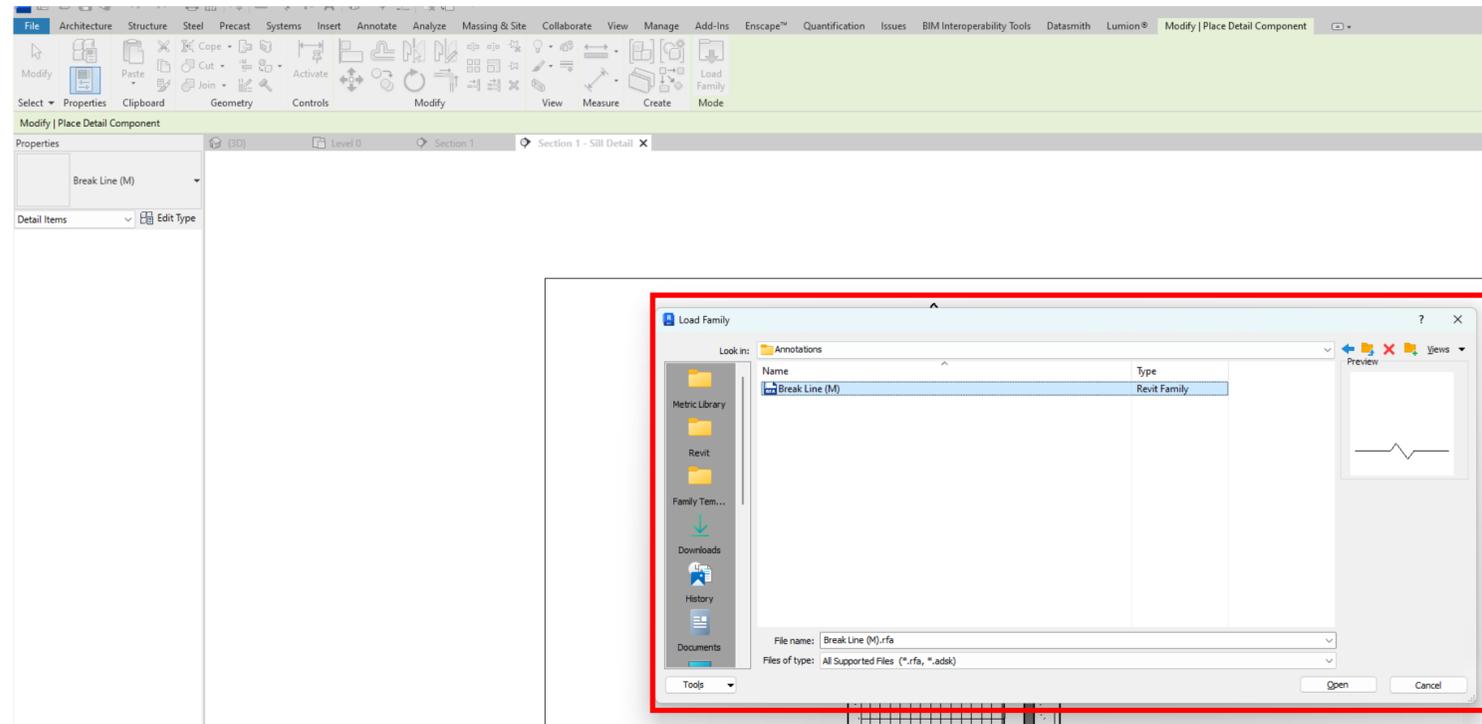
4. Detail components were found online, using the sites provided above.



# Detailing: Detail Components: Break line

1. Break line can be found in: under the annotations tab click Component > load family → New Zealand → Detail Items → Annotations → 'Break Line. (M)

2. Click to place (space to rotate), using arrows to change size of break line.

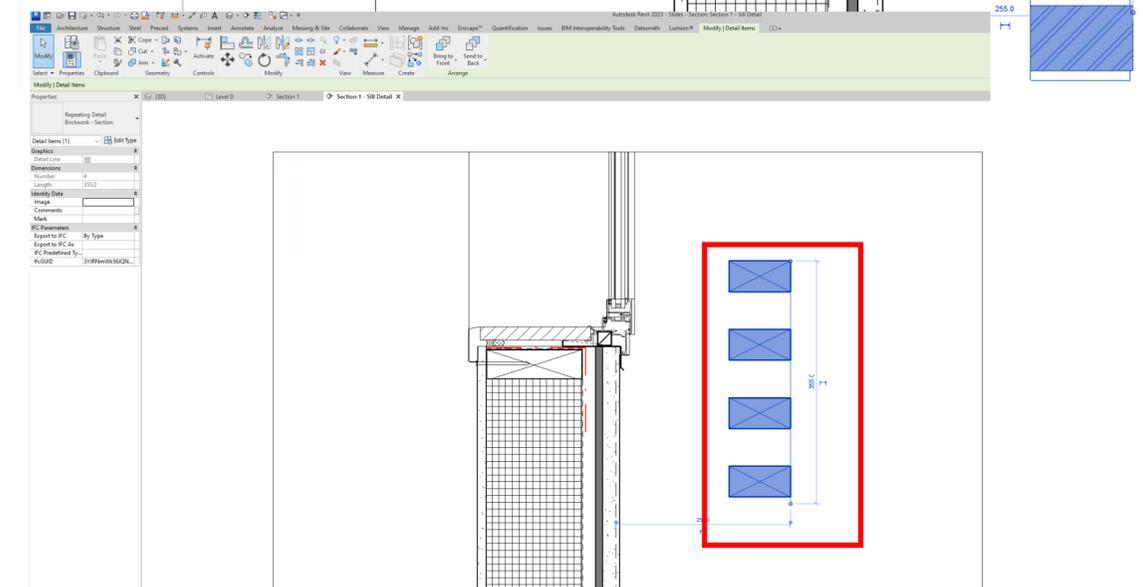
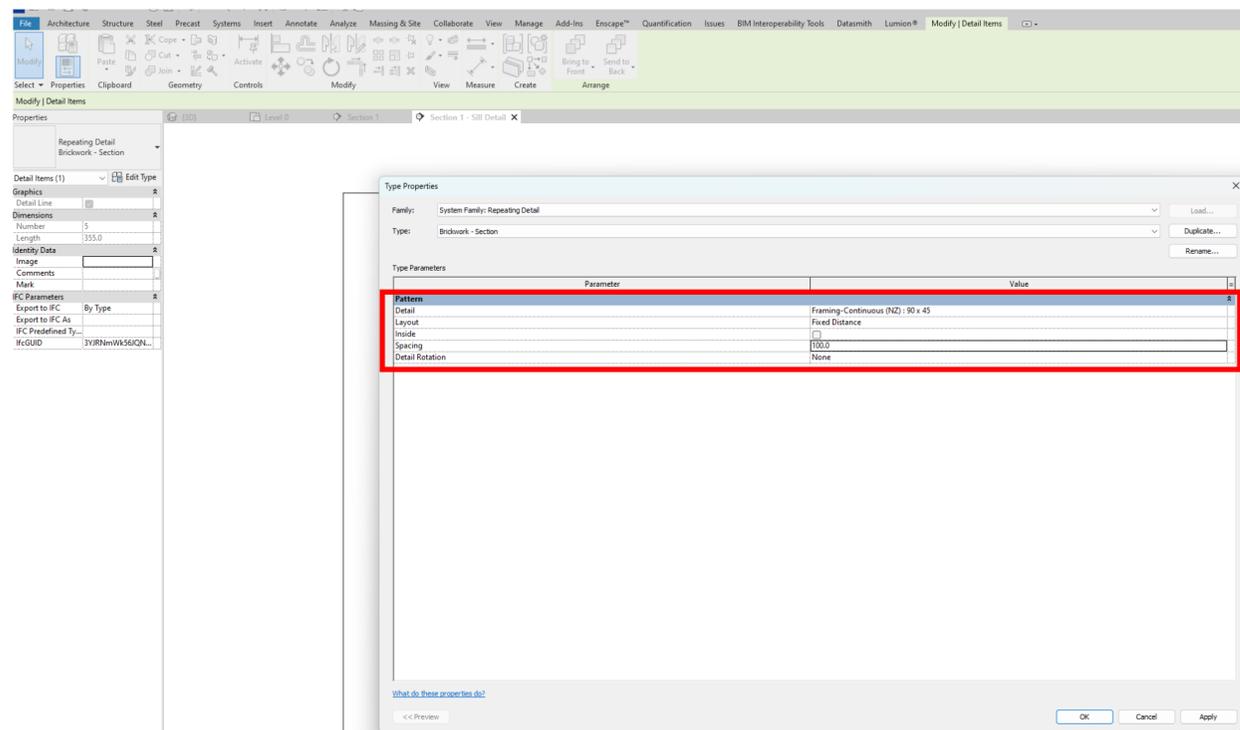
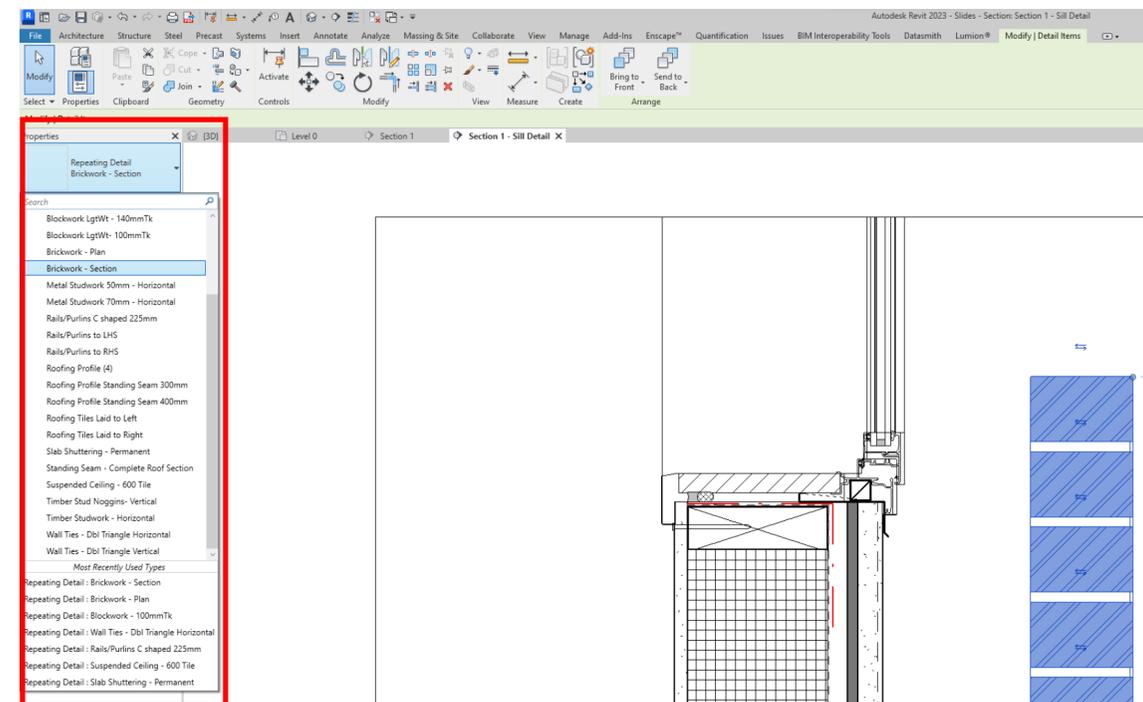
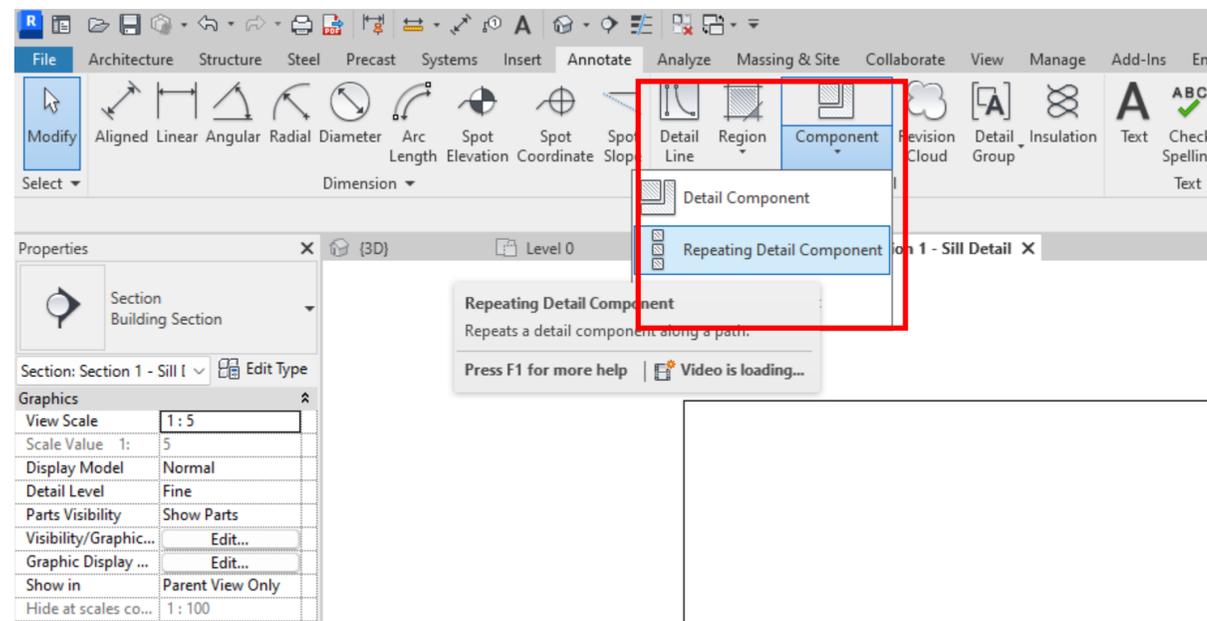


# Detailing: Repeating Detail Components

1. Repeating detail components are very useful → annotate → component (drop down) → repeating detail component

2. To create own repeating detail → edit type → select detail item, layout and spacing.

3. Experiment and create your own repeating detail items.

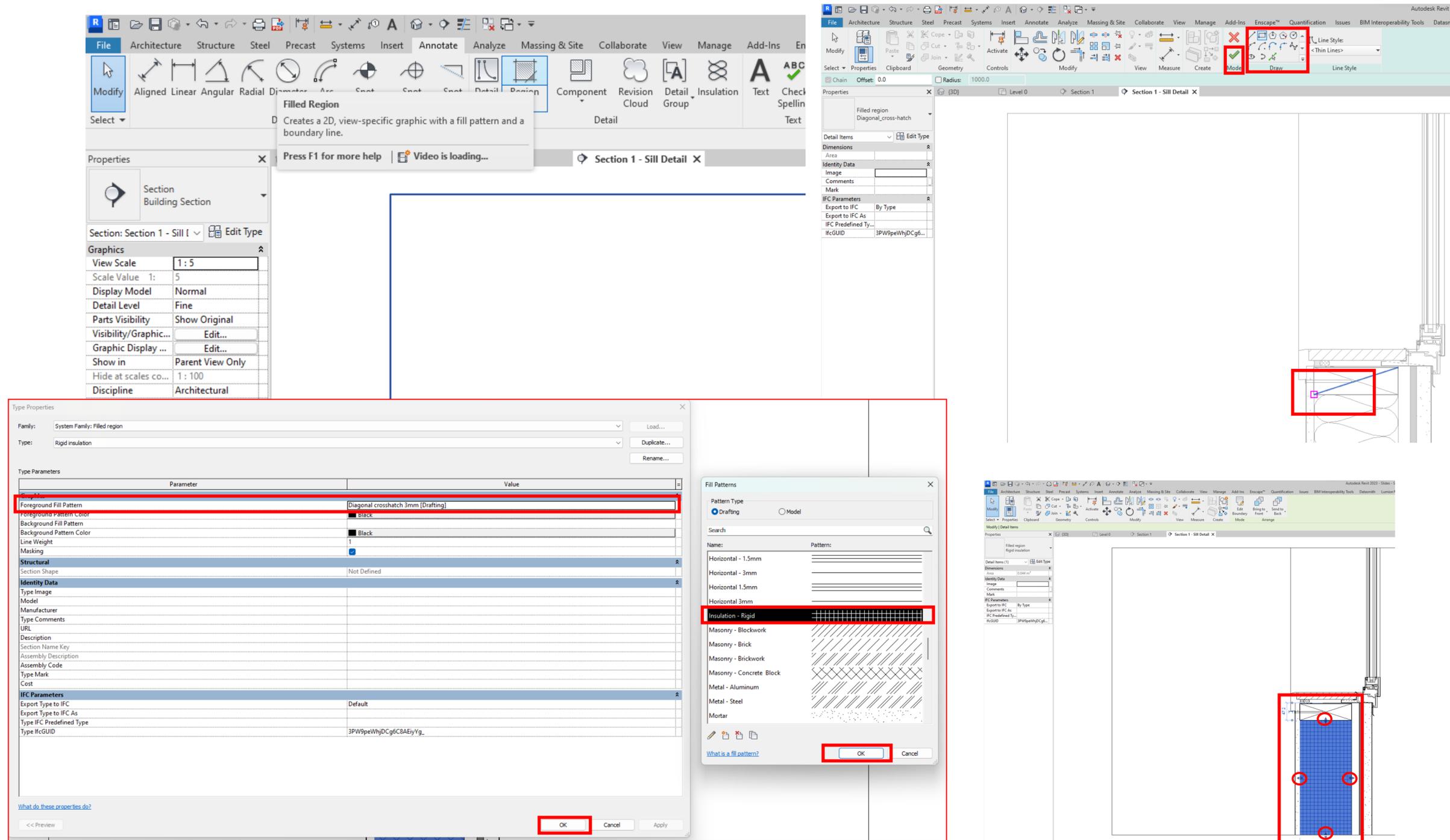


# Detailing: Filled Region

1. Use the filled region tool to hatch  
 → we will draw in rigid insulation as an example → select rectangle tool → click point to begin, drag, click again to finish drawing → click green arrow to finish 'edit mode.'

2. Default is diagonal hatch → create new by → edit type → duplicate → rename ("rigid insulation") → change foreground fill pattern to 'insulation-rigid' → hit 'ok' → 'ok' again to finish

3. Resize by dragging arrows provided when filled region is selected.

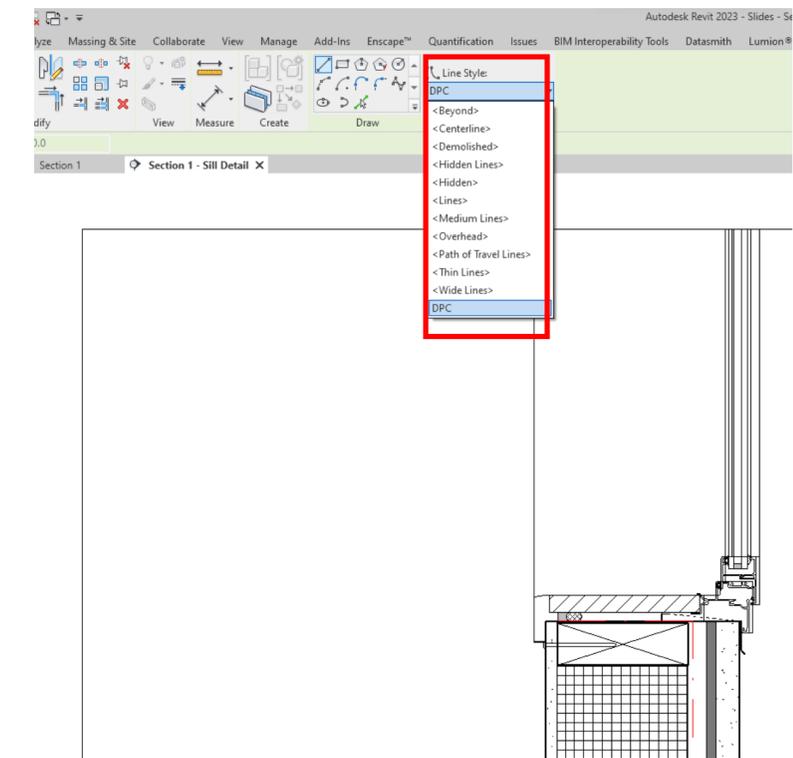
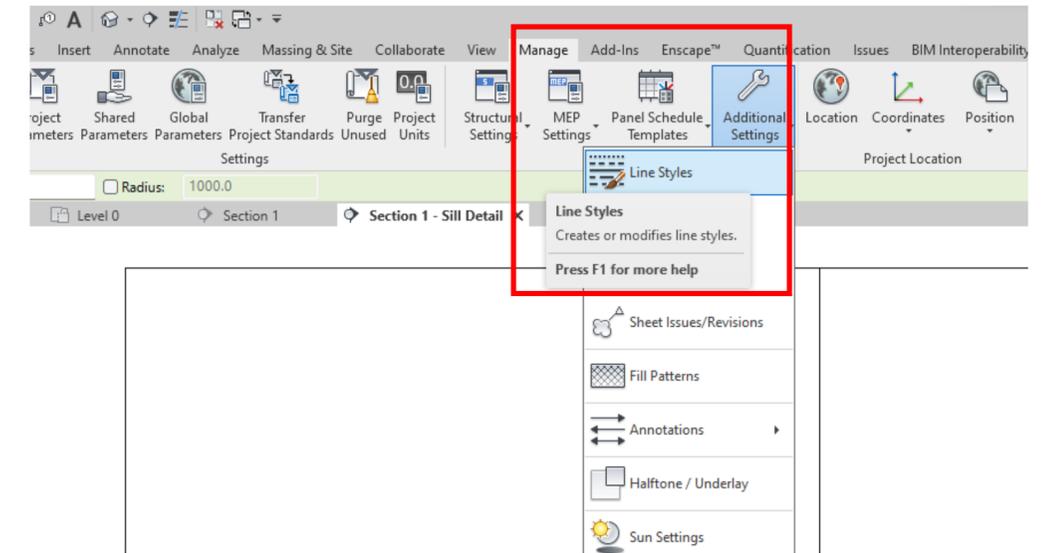
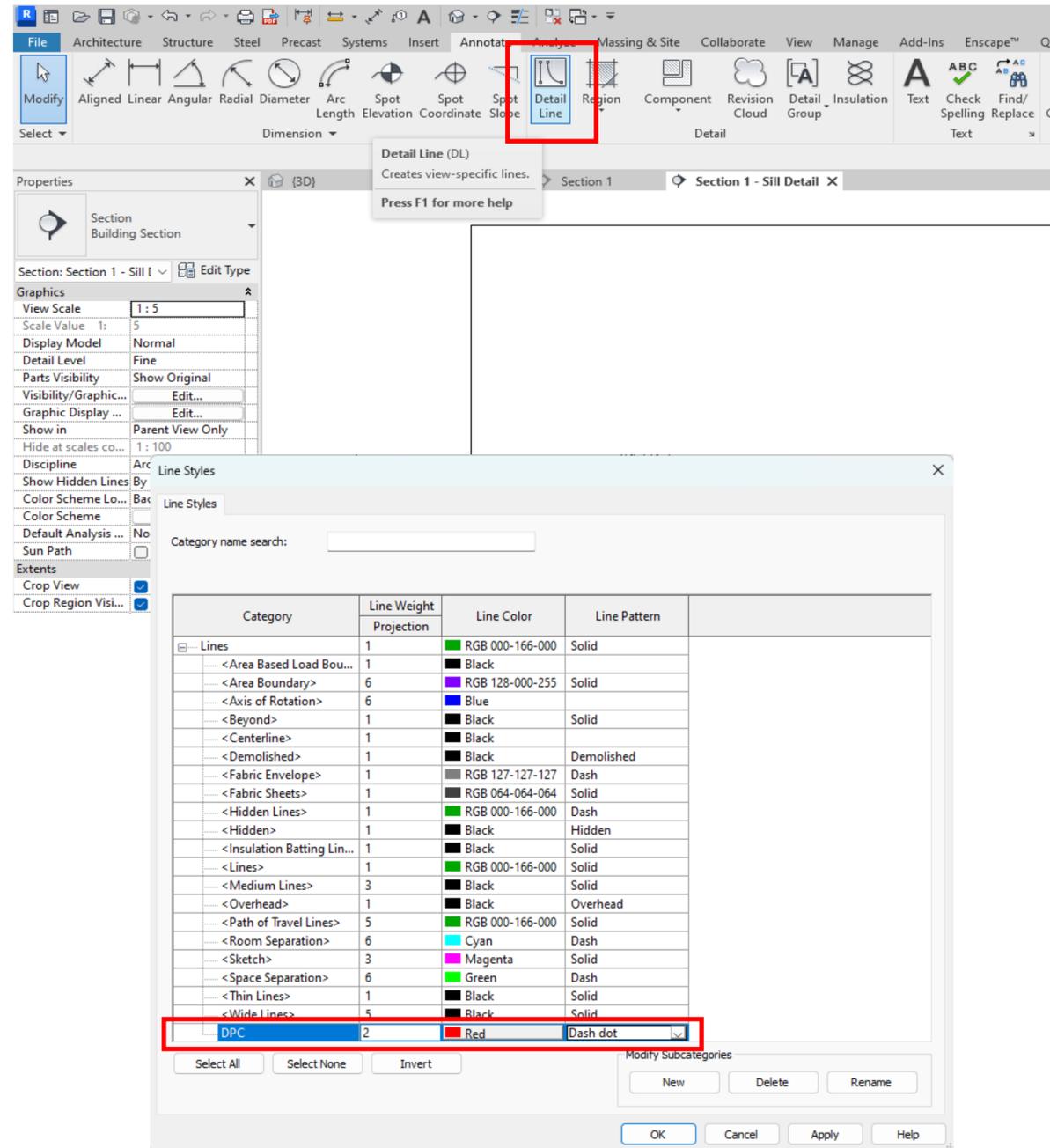


# Detailing: Detail Lines

1. We will use the detail lines to outline the vapour control air barriers. To create own → under manage tab → additional settings → line styles (tab pop up) → click 'new' under Modify Subcategories → rename → change Line weight projections, Line colour and Line Pattern based on preference → hit 'ok' → back in Detail Line (type DL for shortcut) new line option will be available to select.

2. Explore with different line colours and patterns, creating your own lines.

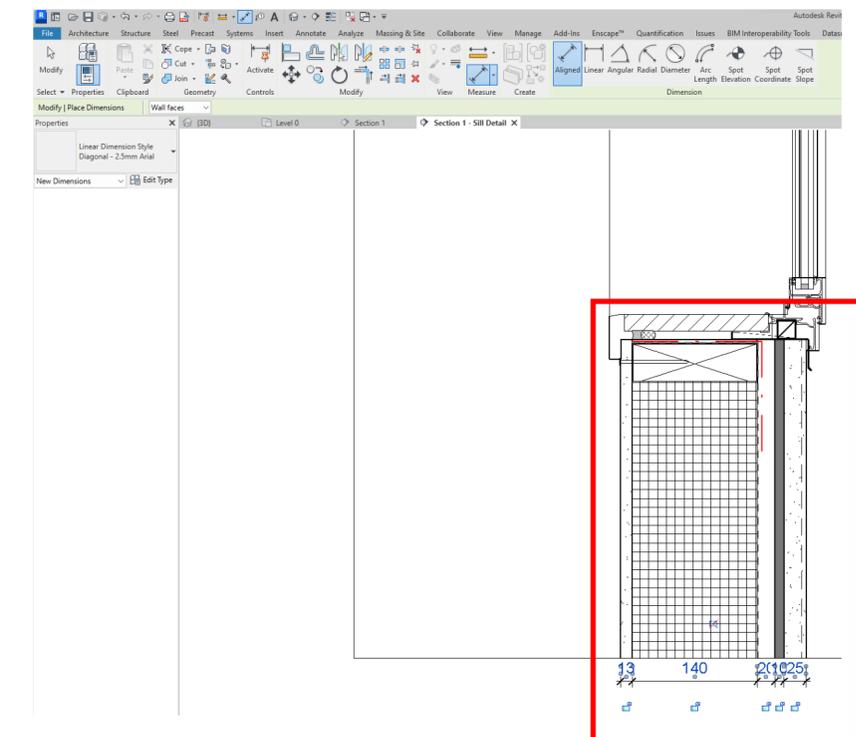
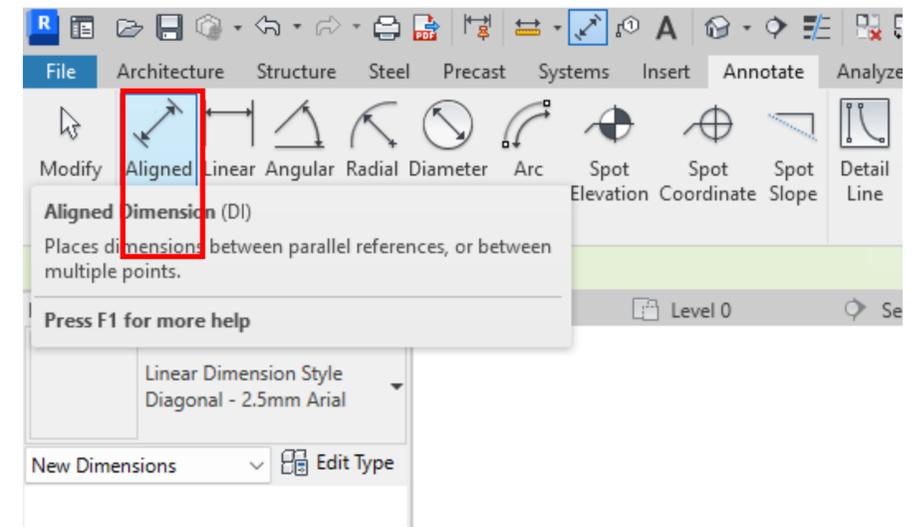
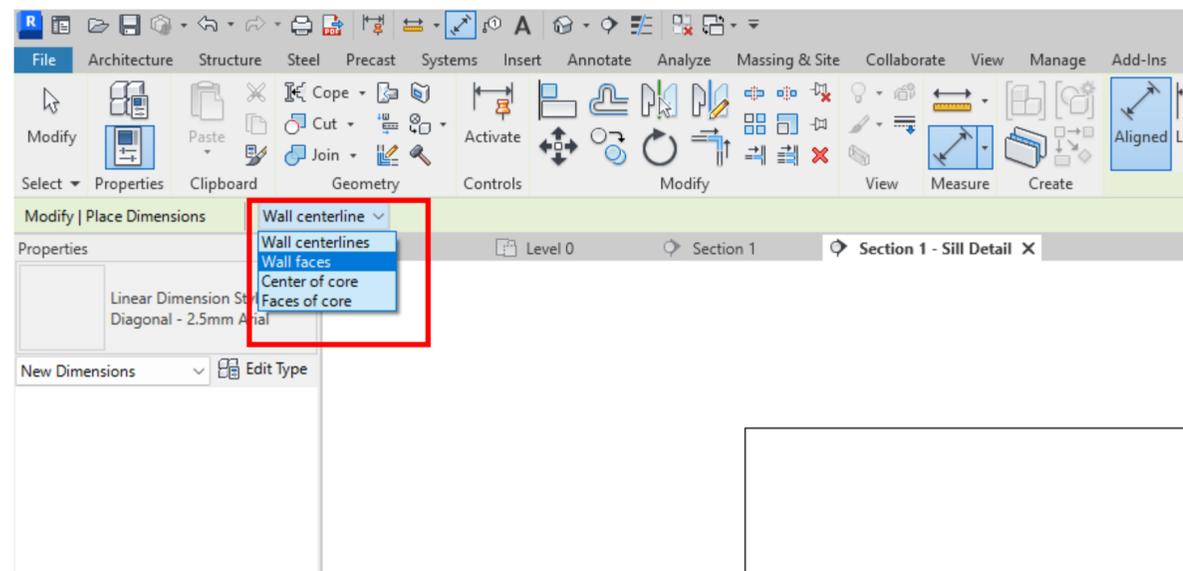
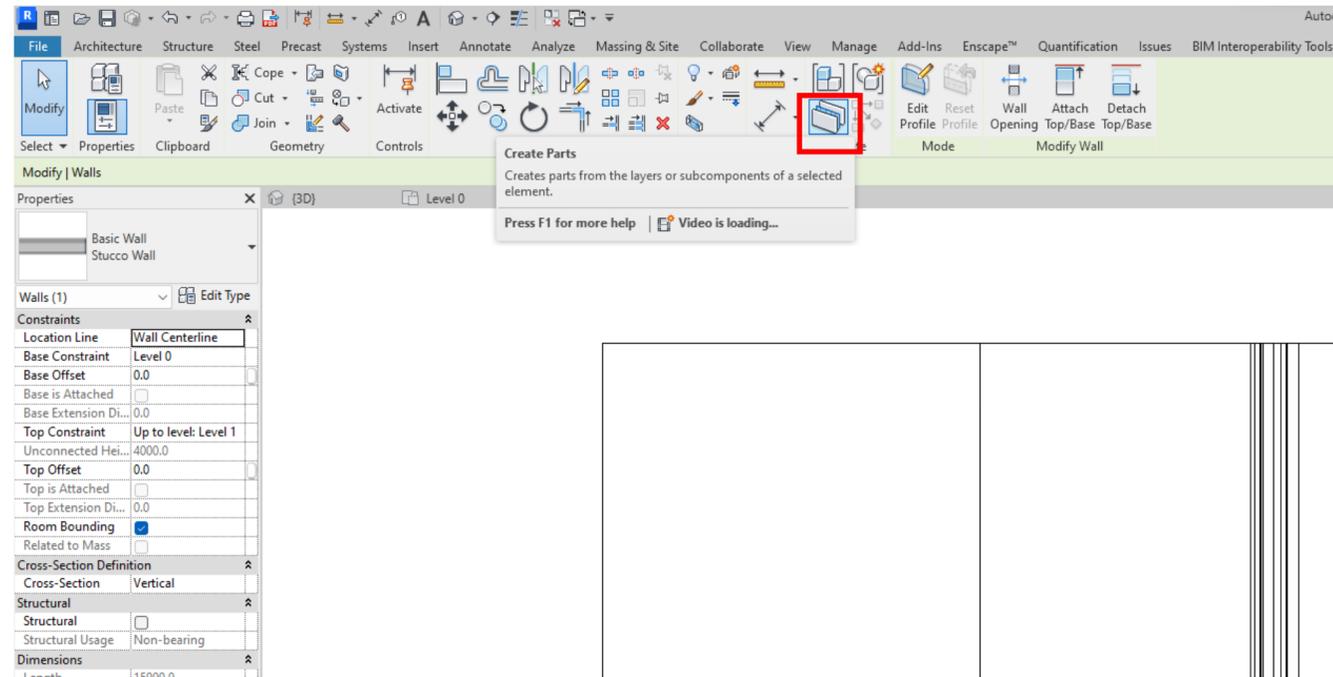
3. Create another dashed line to show building paper. (2mm, grey, dashed 1.5mm)



# Detailing: Dimension Tools

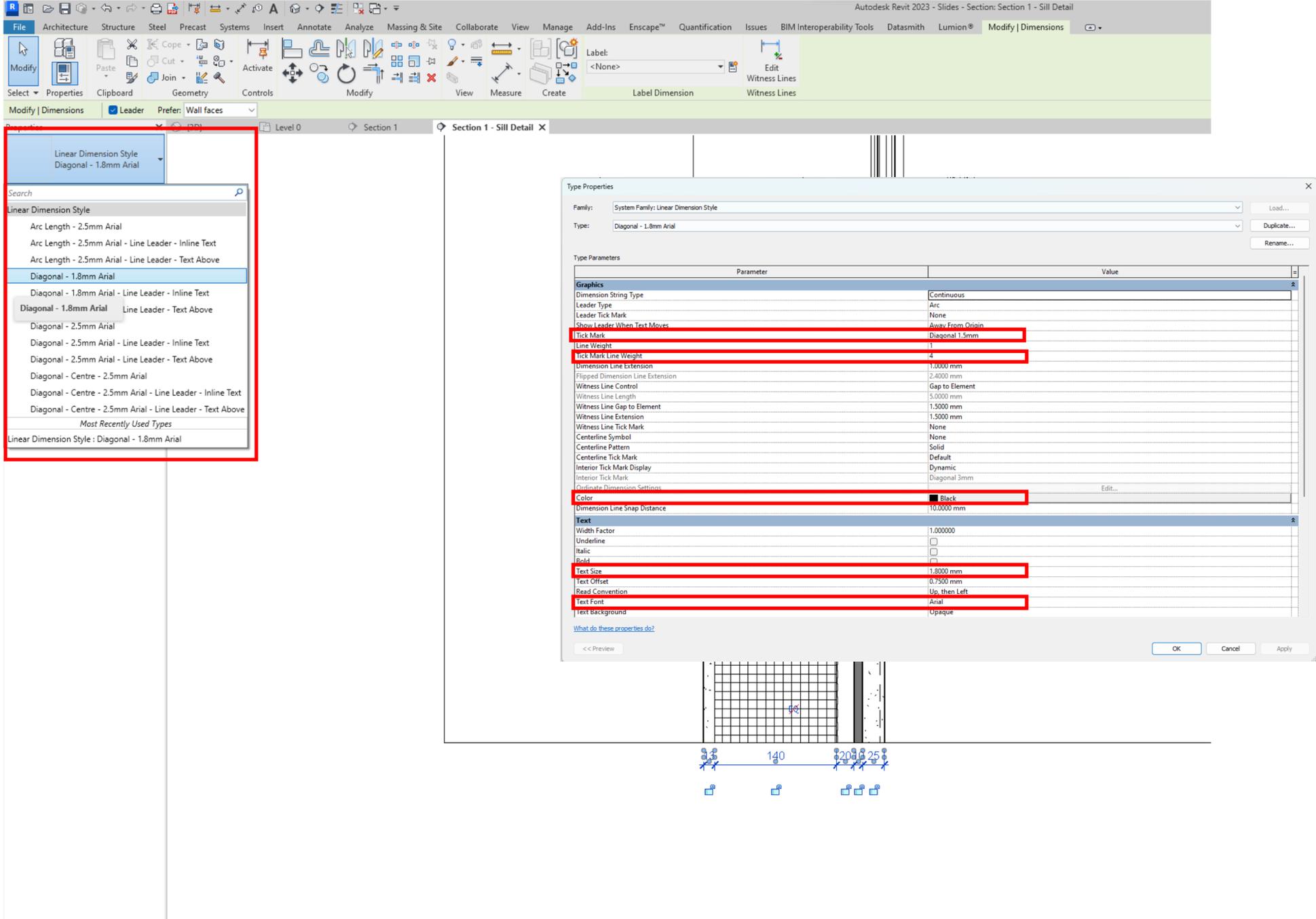
1. To annotate the dimensions, we use the 'aligned dimension' tool → before doing so make sure to split the wall into parts, with wall selected, click 'Create parts.'

2. DI for aligned dimension → with wall faces selected, select each face of the wall click on empty area to complete dimensions.



# Detailing: Dimension Tools

- 1. To change size of annotations, with dimensions selected, under properties select another option.
- 2. To create custom → edit type → change text (font, size colour) based on preference → also options to change tick marks and sizes.



# Detailing: Annotate

1. Finally, to annotate the detail with text under annonate tab → text → click once to create a textbox → input relevant detail → add leader, drag to relvant detail using the circles.

2. To create custom → edit type → change text (font, size colour) based on preference → also options to change leader arrow.

