Beginner Revit Tutorial

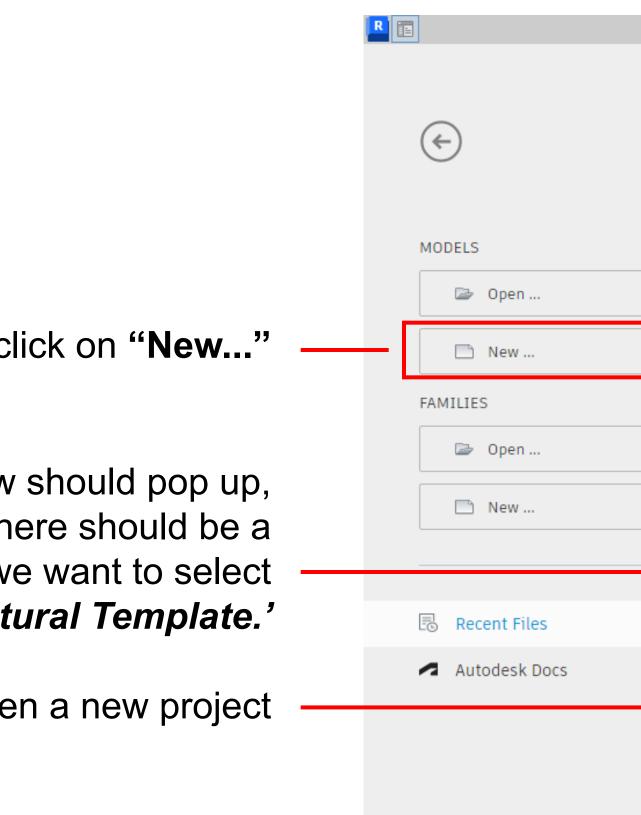




Revit 2023







To create a New Project, click on "New..."

Then a window should pop up, under "Template file" there should be a drop down menu and we want to select 'Architectural Template.'

Then click **OK**, and it should open a new project

Autodesk Revit 2023 - Educational Version - Home

Recent Files

MODELS



Sample Architecture Proj...

Sample Architecture Fami...

FAMILIES

New Project - Template file

Sample Structure Project Architectural Template -Create new Project MA

Sample Structure Family

Sample Systems Family

OK



Browse...

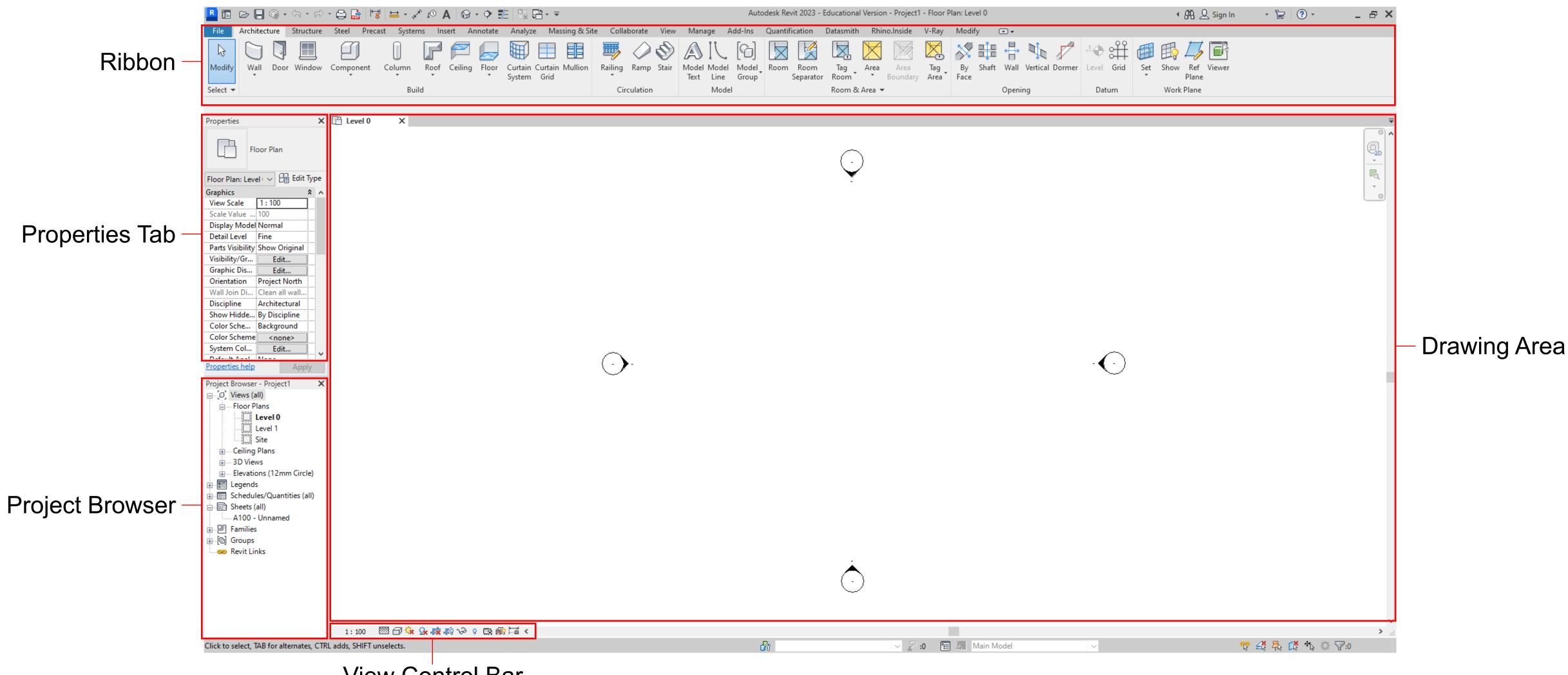
Help

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O Project template

Cancel





View Control Bar

GENERAL USER INTERFACE



GENERAL USER INTERFACE

Ribbon - The ribbon displays when you create or open a file. It provides all the tools necessary to create a project or family. All the tools are grouped into different categories.

Properties Tab - The Properties tab is where you can view and modify the parameters and properties of the different elements in the project.

Project Browser - The Project Browser shows all the different views, schedules, sheets, groups, and other parts in your current project.

View Control Bar - The View Control Bar has different display options and functions for the current view in the Drawing Area

Drawing Area - The Drawing Area displays the selected view, sheet or schedule.

GENERAL MOUSE CONTROLS

LMB

The LMB is used to select and move different elements

Create a selection box - HOLD LMB + Move mouse

Add Elements to a Selection - HOLD Shift + PRESS LMB W (If you hold down Shift, a little minus sign will appear above the mouse. So if you hold down Shift, you can deselect objects from a *current selection.*)

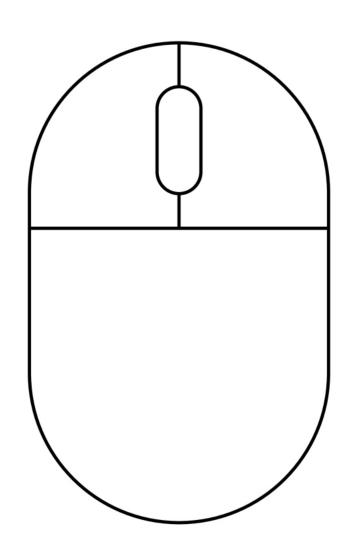
Remove Elements from a selection - HOLD Ctrl + PRESS LMB (If you hold down CTRL, a little plus sign will appear above the N mouse. So if you hold down CTRL and start selecting objects they will be added to the current selection.)



Orbit View in 3D View - HOLD Shift + HOLD MMB + Move Mouse you can orbit the view

MMB (Middle Mouse Button)

LMB (Left Mouse Button)



RMB (Right Mouse Button)



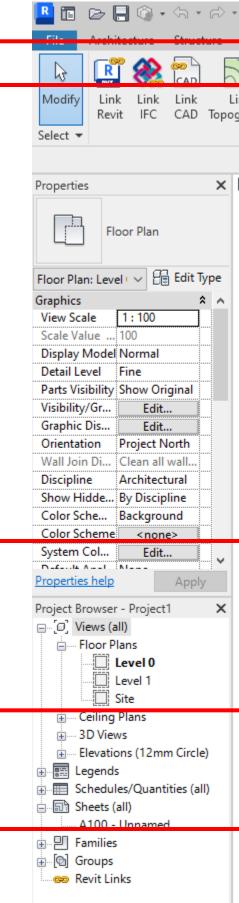


To import the contour .dwg file, we first want to go to the **Insert** tab, then click on **Import CAD**

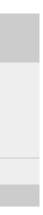
A new window should pop up, Navigate to the '.dwg' file and select it

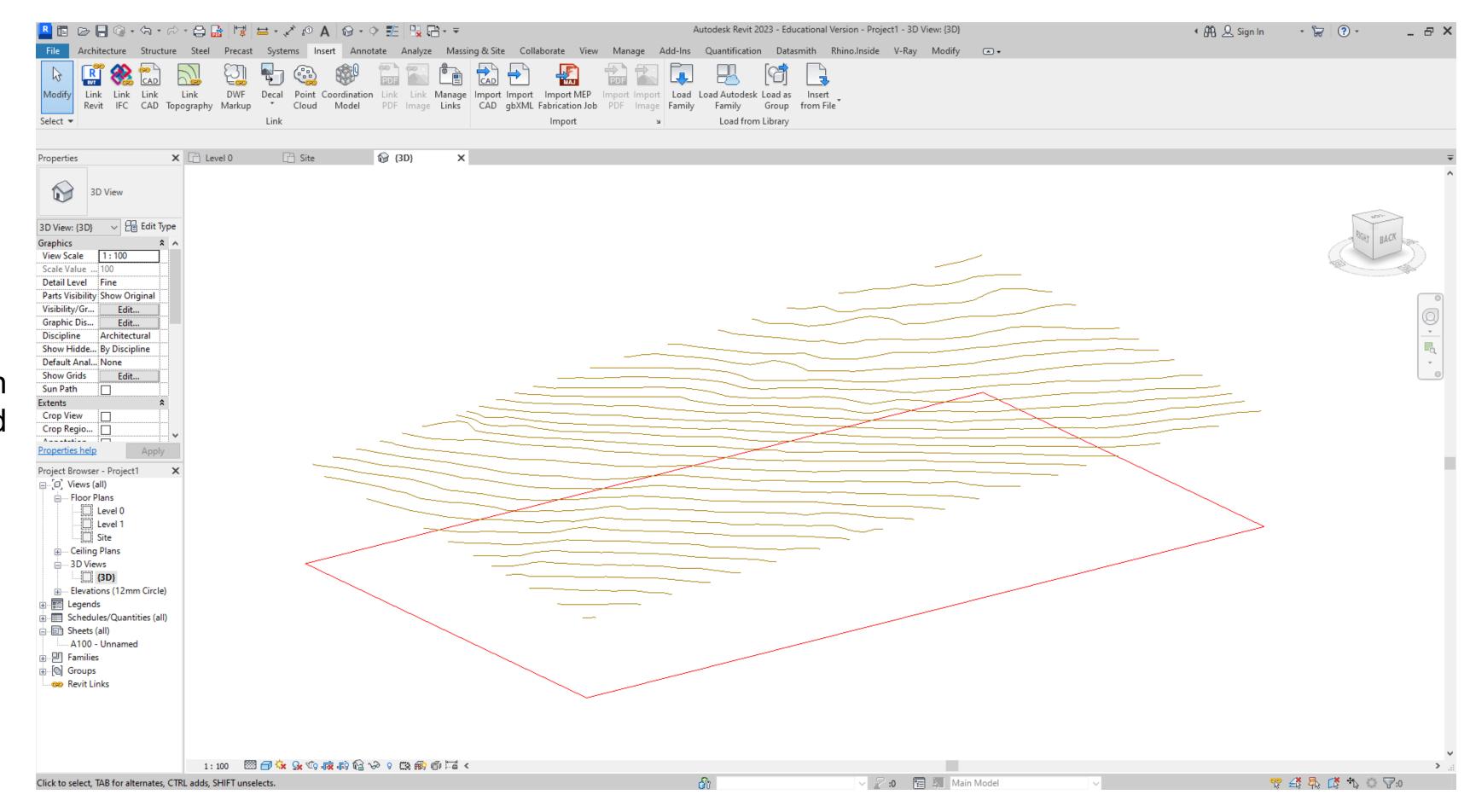
Make sure in the "Files of type:" section you have "DWG Files (*.dwg)" selected

Then click "Open"



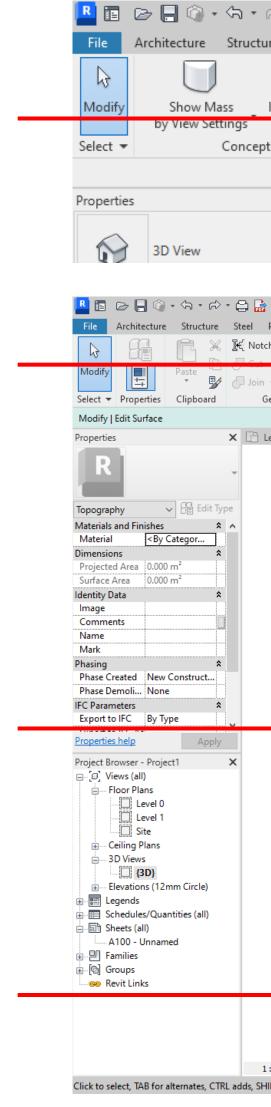
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Make sure in the "Files of type:" section you have "DWG Files (*.dwg)" selected

<u>TOPOSURFACE</u>



To make your site topography start with selecting **Toposurface**

In the modify tab Create from import > Select Import Instance

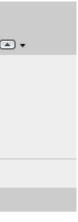
Select the **Contours** layer from the pop up window

Once the you hit **OK** the topography will be generated

Surface

Then hit the tick button to complete the surface

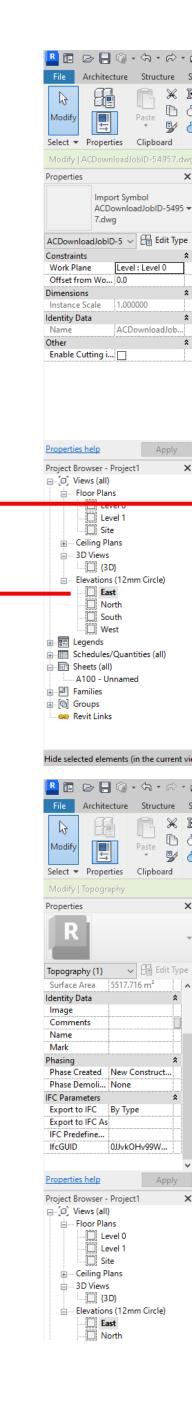
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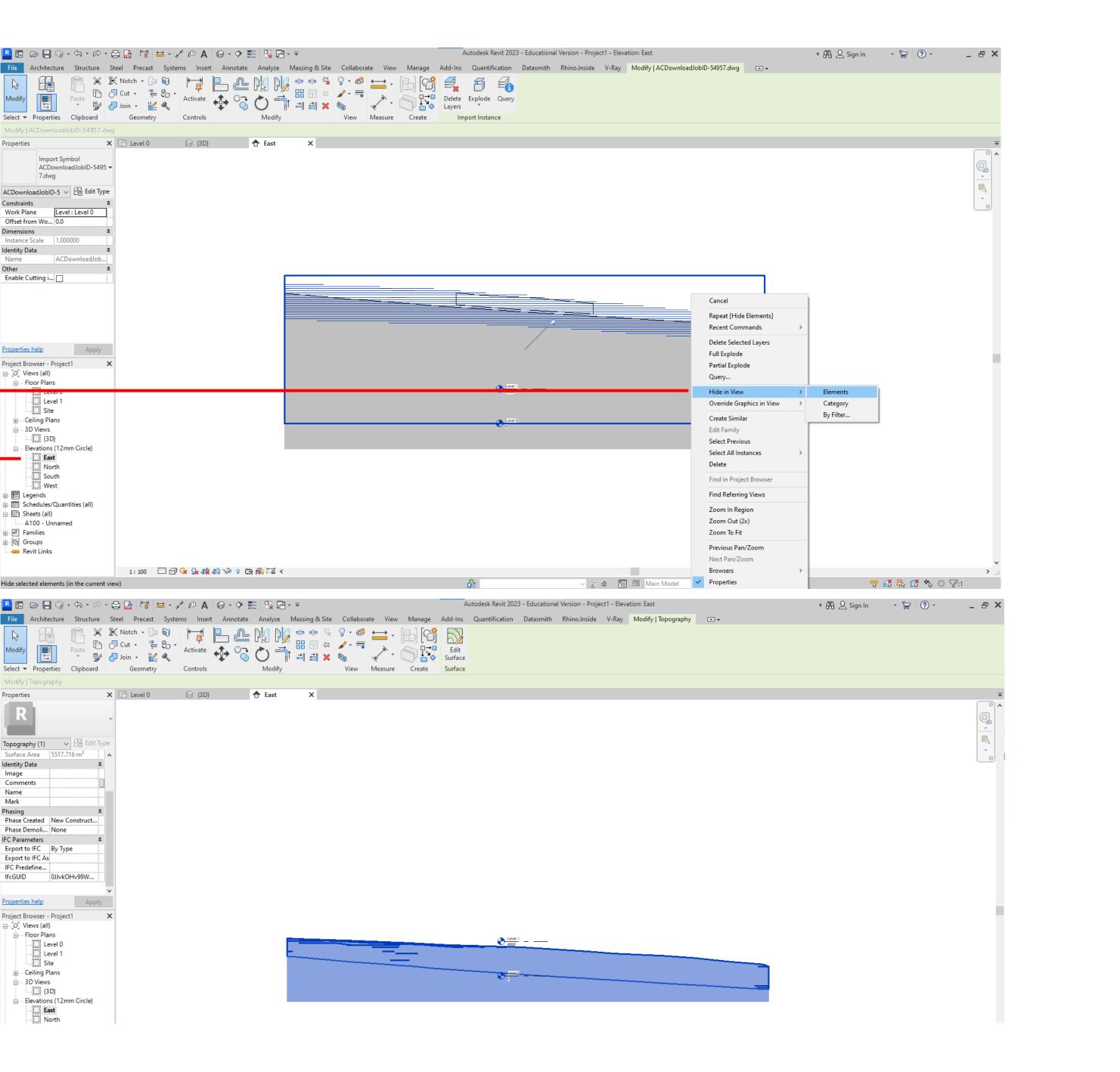




*You can hide imported lines to avoid selection by right clicking the lines and selecting **Hide in View > elements**

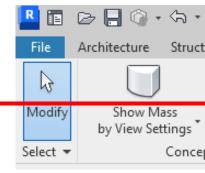
Under a elevation view drag the topography down to meet the base floor level

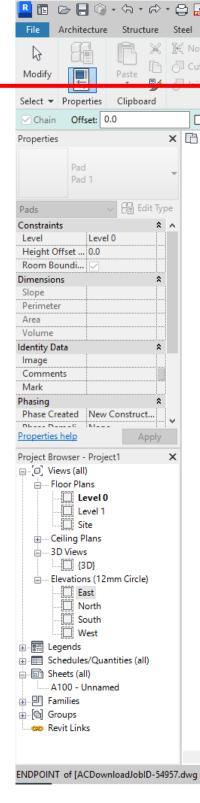




With a Toposurface you can now create a **building pad** for the project to sit on the site.

In your base **Floorplan view** sketch out the **Building pad** dimensions using the **Draw** tools



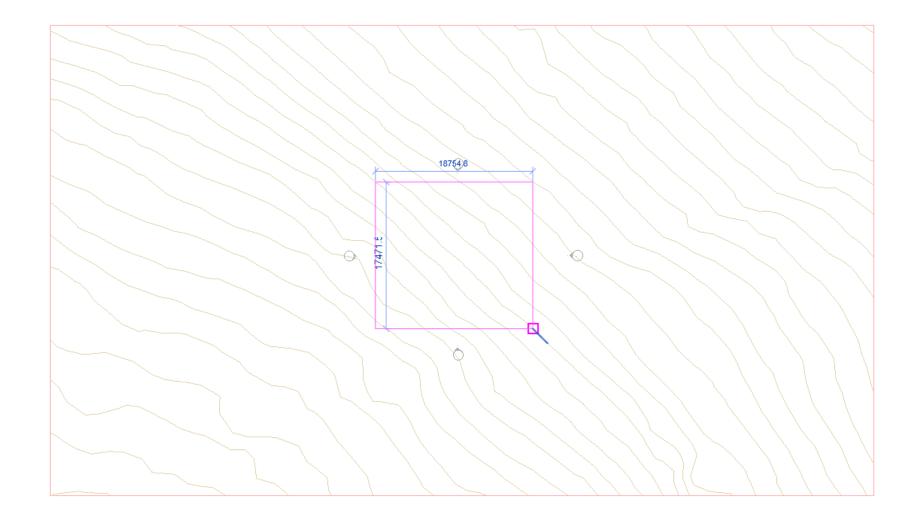


Then hit the tick button to complete



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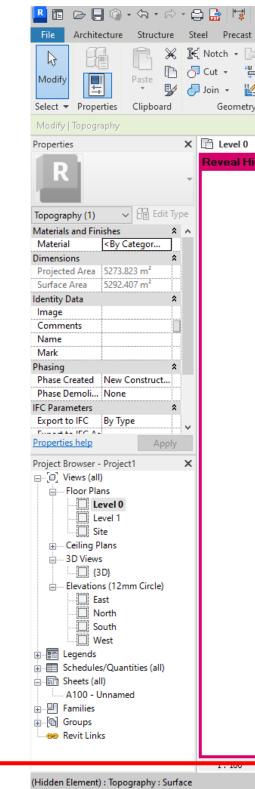


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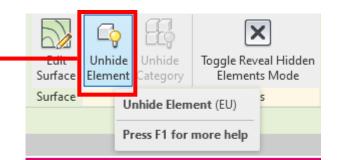
REVEAL HIDDEN ELEMENTS



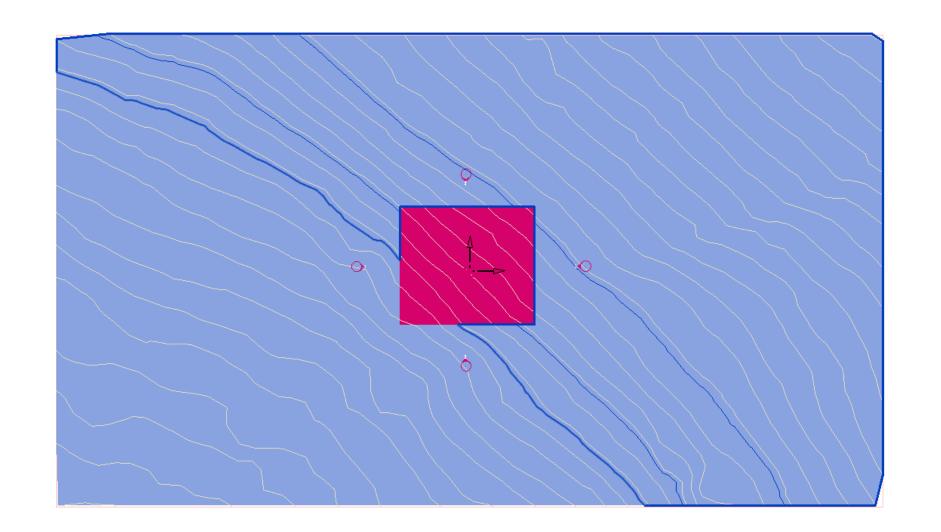


If you find the toposurface hidden in the view you can **Reveal Hidden Elements** using the light bulb button.

*All objects in hot pink are hidden elements. To unhide select the **hidden element** and click **Unhide Element**



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<u>WALLS</u>

Properties

Walls (1)

Constraint

Location Line

Base Offset

Top Offset

Base Constraint

Base is Attached

Top Constraint

Top is Attached

Cross-Section

Structural

Structural

Dimension Length

Area

Volume Identity Data Image Comments Mark Phasing

Base Extension ... 0.0

Top Extension ... 0.0

Room Bounding 🔽 Related to Mass

Cross-Section Definition

Basic Wall

0.0

0.0

Phase Created New Construction

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Phase Demolish... None

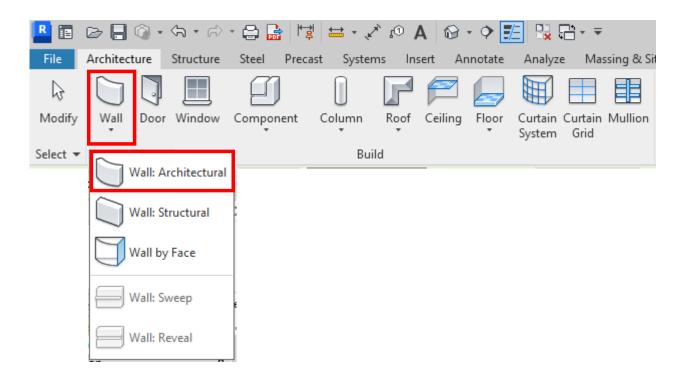
Export to IFC By Type

IFC Parameters

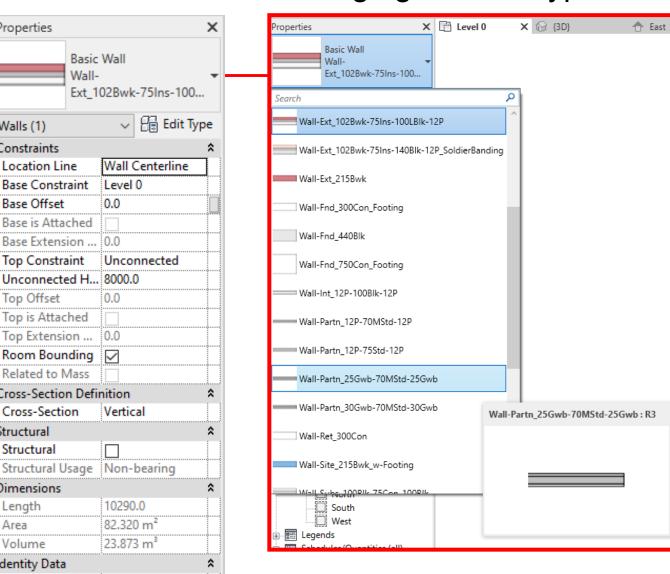
Export to IFC As IFC Predefined ...

IfcGUID

Wall-

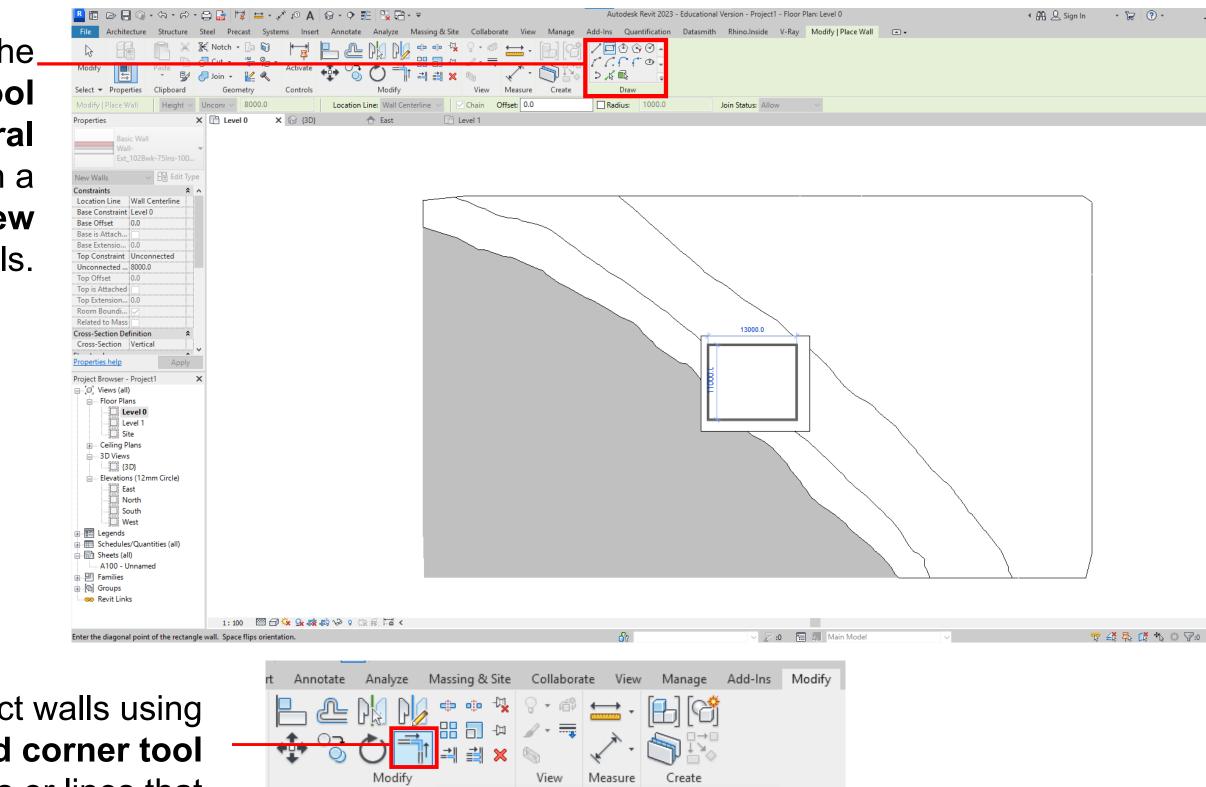


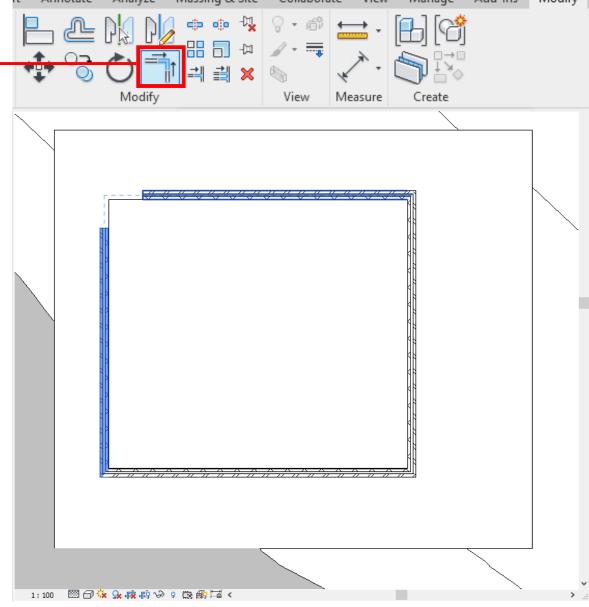
Create a wall with the Wall tool > Wall: Architectural Draw the walls in a Floor Plan view using the drawing tools.



Changing the wall type

Tip -You can connect walls using the Trim/Extend corner tool If you've drawn walls or lines that aren't quite meeting this is a fast way to connect them.







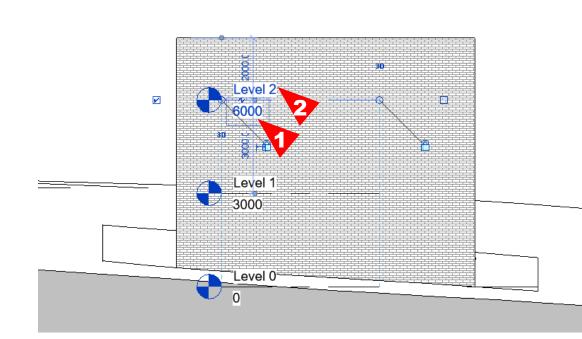


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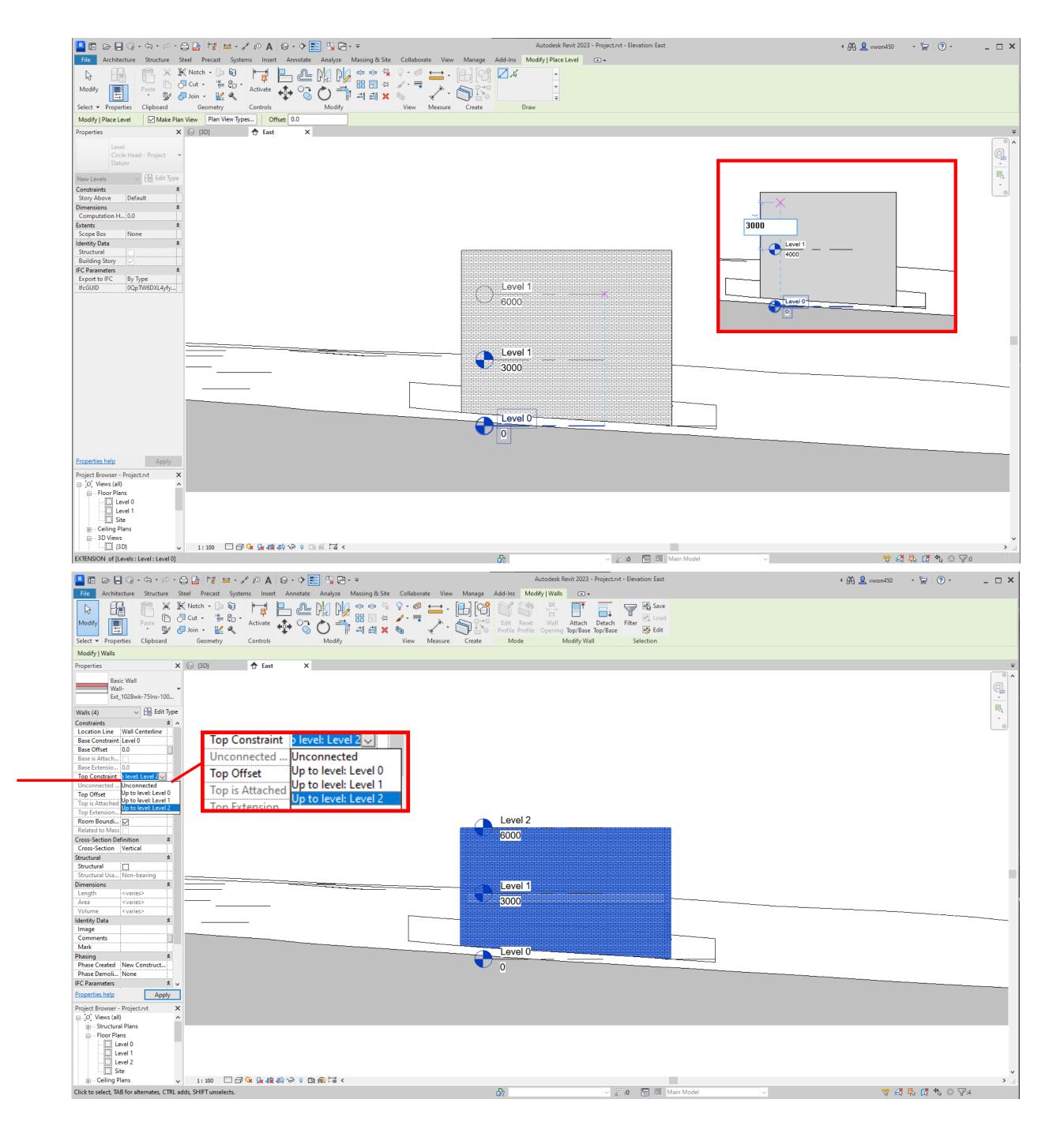
Create a new level in a **elevation** view by selecting the **Level** tool and dragging a new line or **hover and type** the height of your next level eg.3000.

Editing options

- Double click to edit height Or drag up or down
- 2. Double click to rename
- eg. Ground Floor



With levels you can attach walls or elements to a level by editing its **Contraint.**



<u>FLOORS</u>

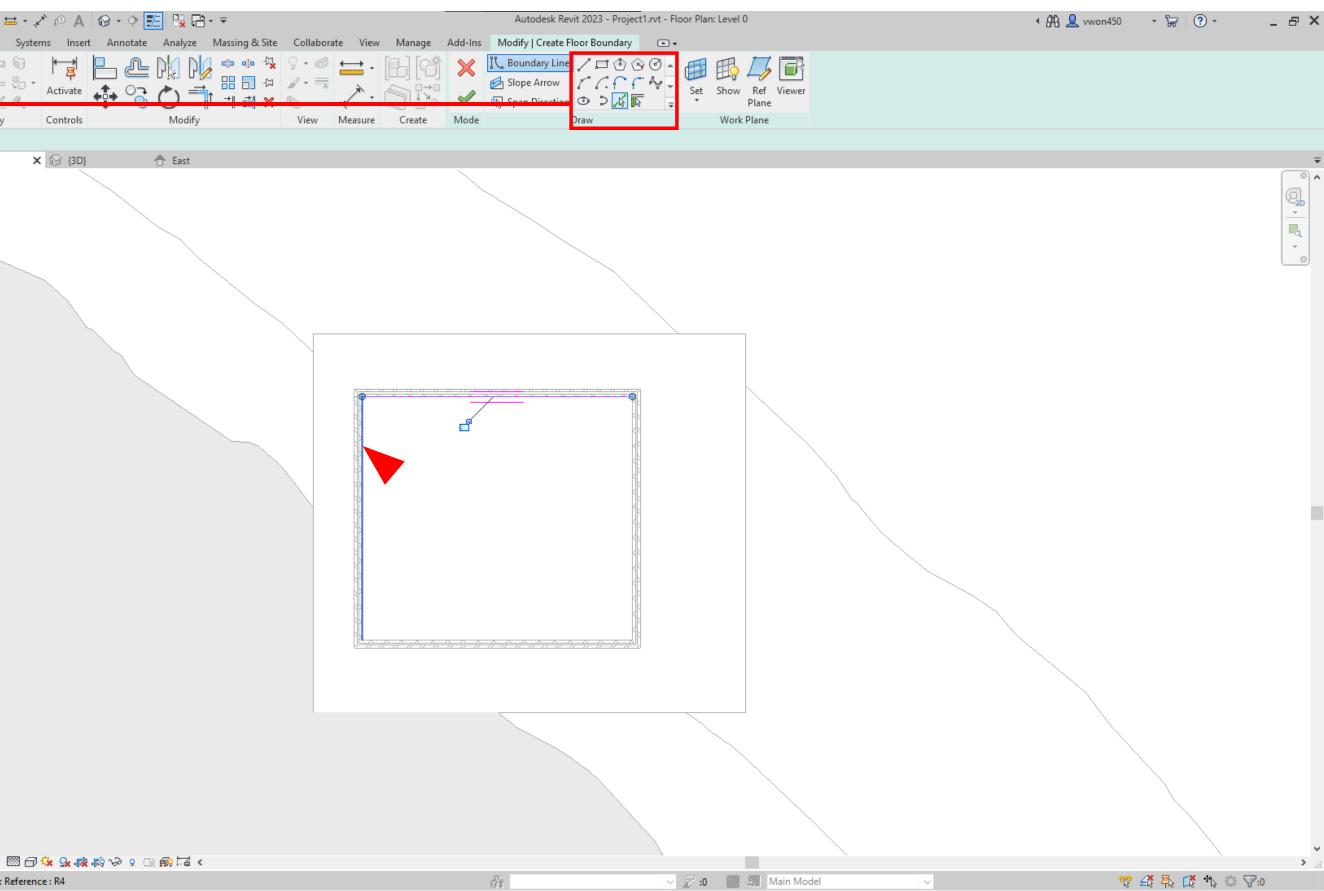
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Floor Plan: Level 0 ~ Edit Ty	pe	Floor: Slab Edge



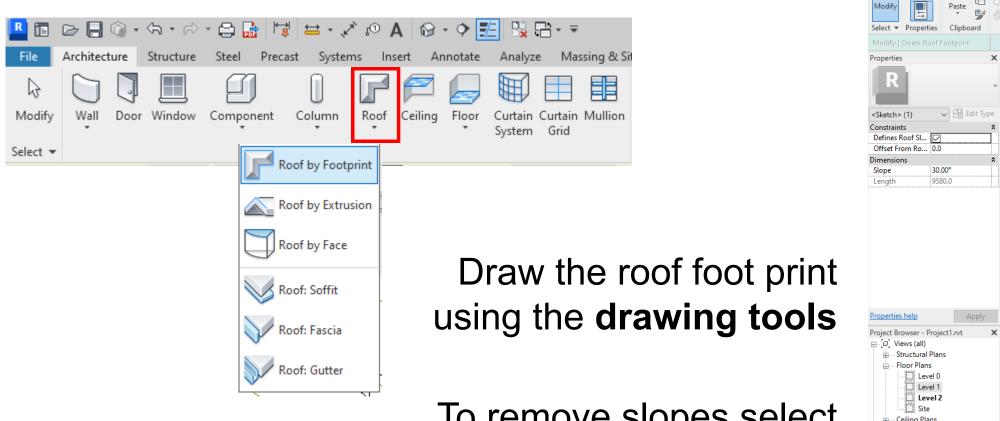
Using the **pick line** tool you can select the interior sides of the wall to form the shape of your floor.

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Walls : Basic Wall : Wall-Ext_102Bwk-75Ins-100LBIk-12P : Reference : R4

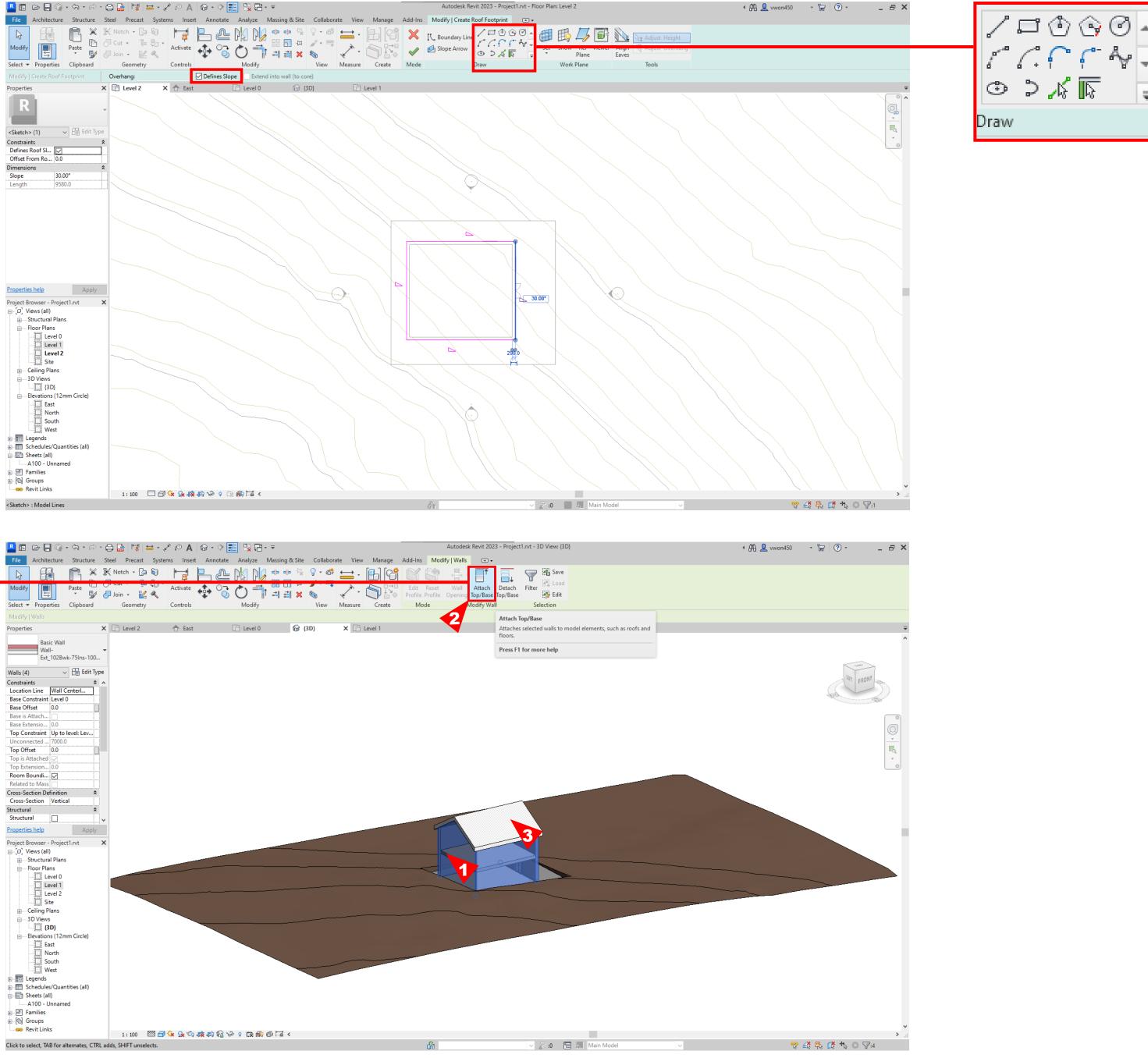


ROOFS



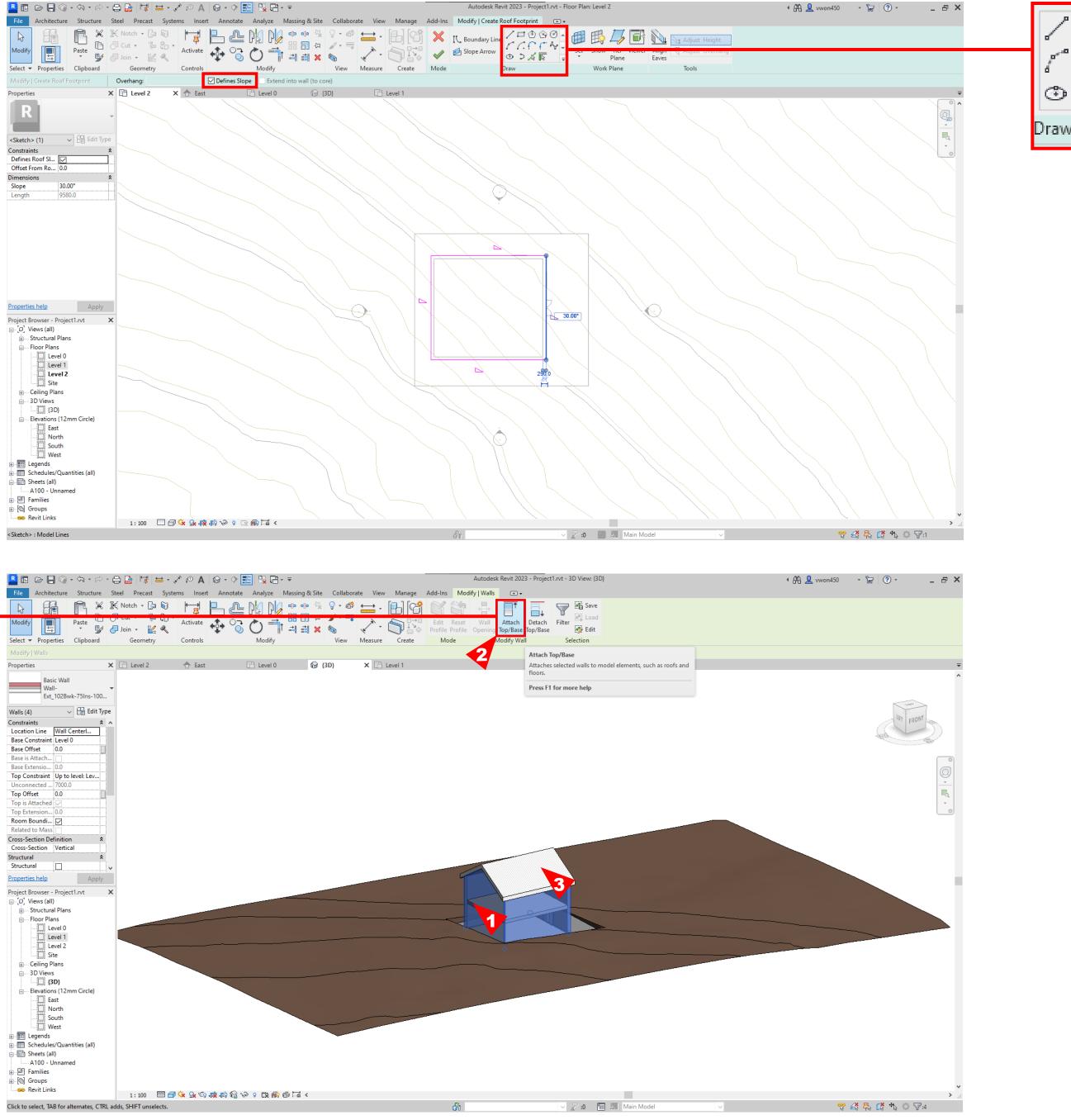
To remove slopes select the roof line and unticking define slope.

Defines Slope



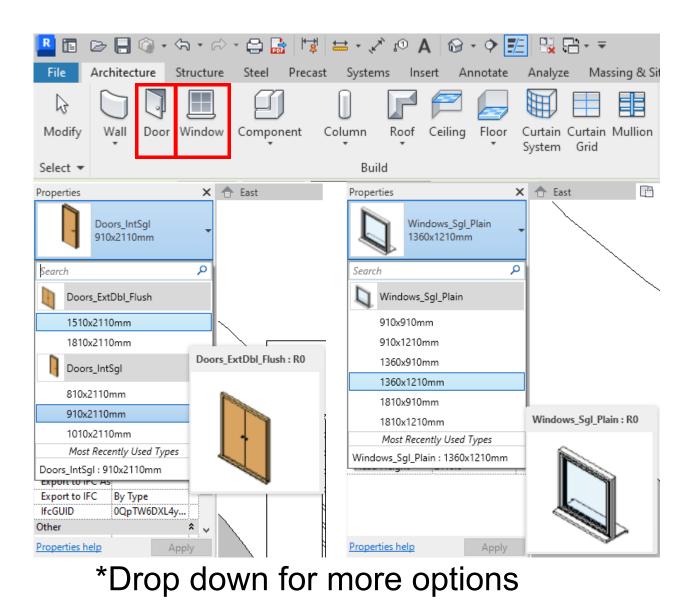
Attach Top/Base In your 3D view you can attach your walls to the roof by selecting the walls and pressing Attach Top/Base.

Then select the **roof** to attach





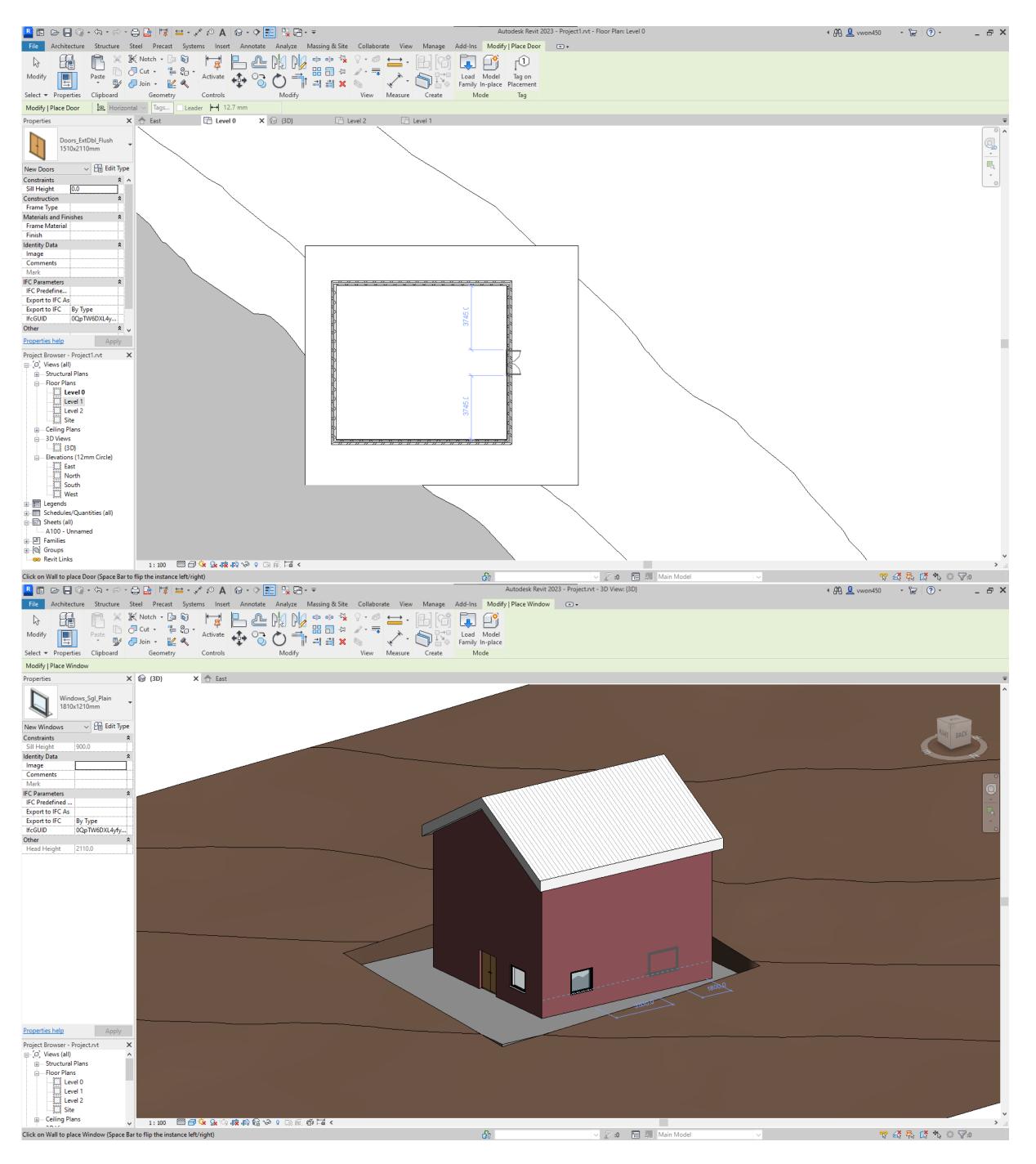
DOORS & WINDOWS



*Make sure that there is a wall to attach doors and windows.

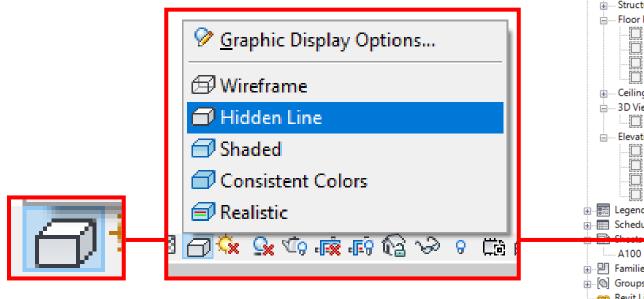
In floorplan view select your door or window and place them on the wall.

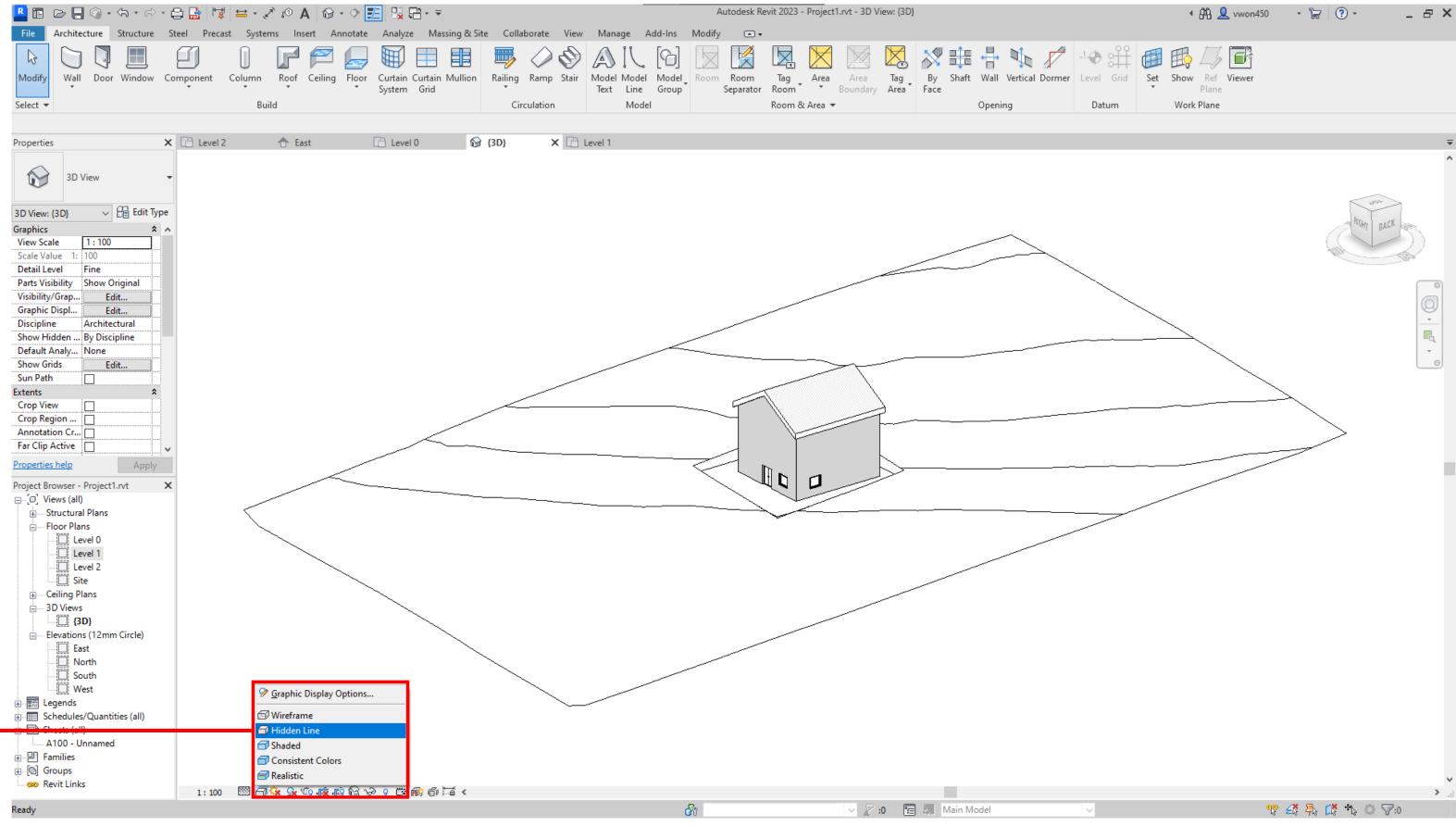
Or you can stick them on in 3D view.



VIEW GRAPHIC DISPLAY OPTIONS







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