Aalto University
School of Engineering

Aalto BIM exercise

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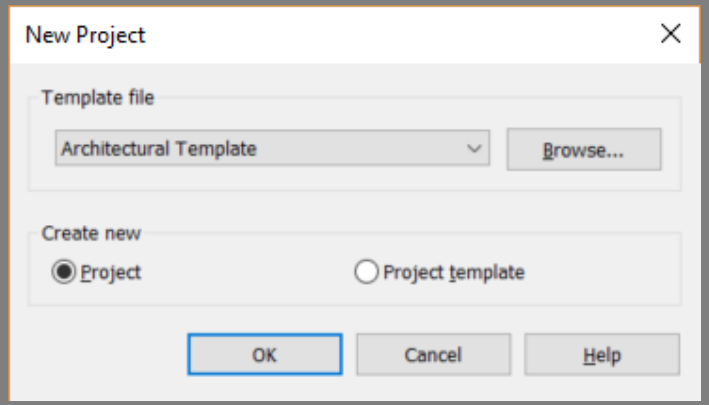
School of Engineering

In use: Revit2017
Architectural template

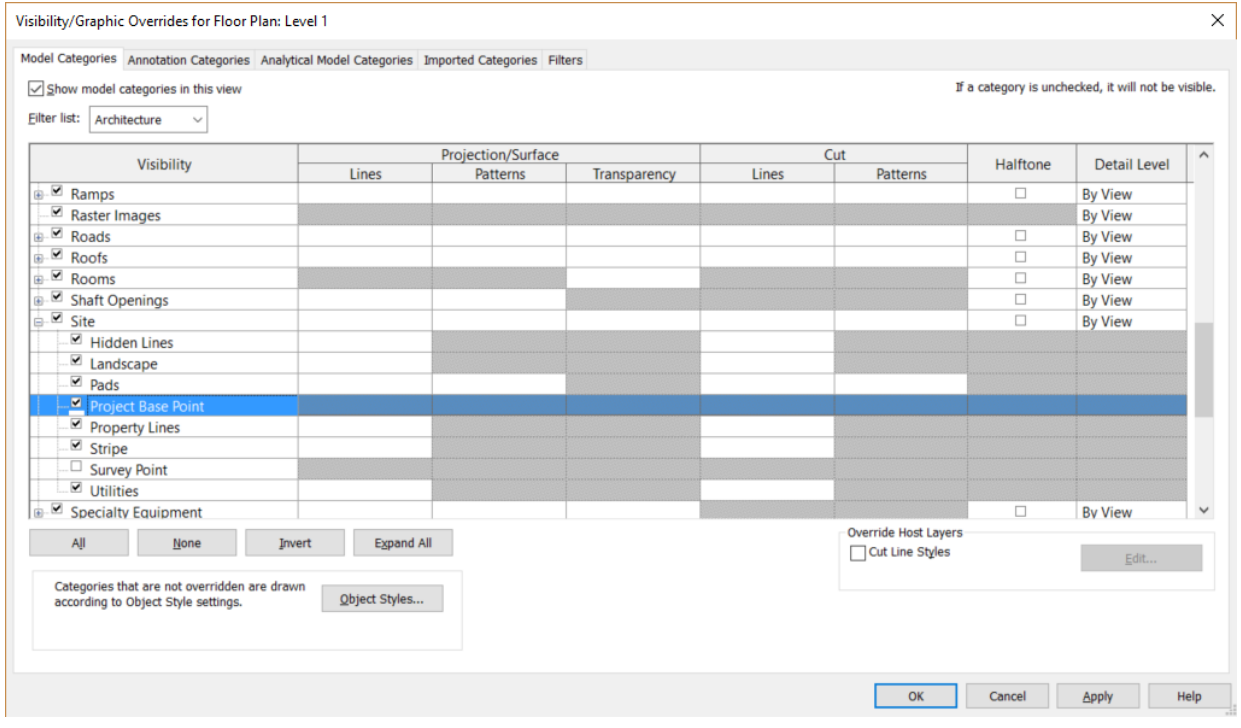


Revit demo

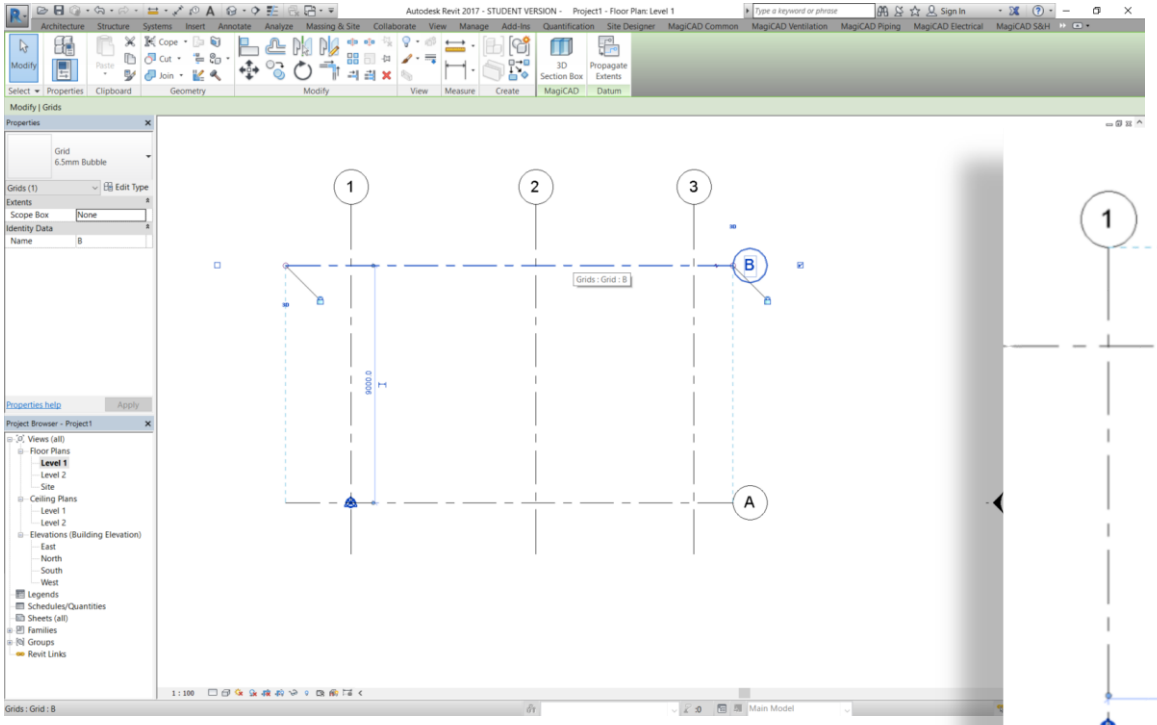
Revit architecture

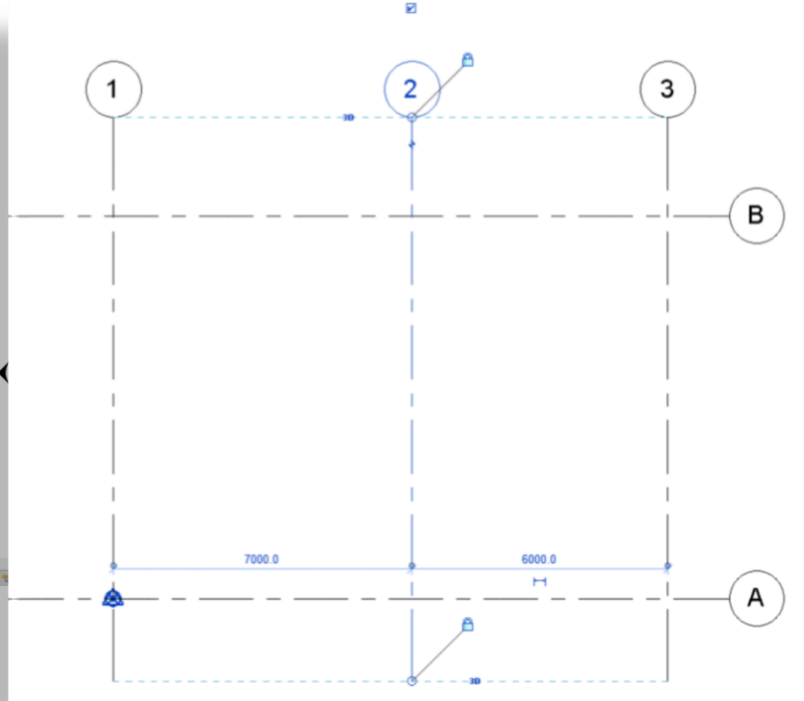
Open revit

Select visibility/graphics from view and make project base point visible



Grid

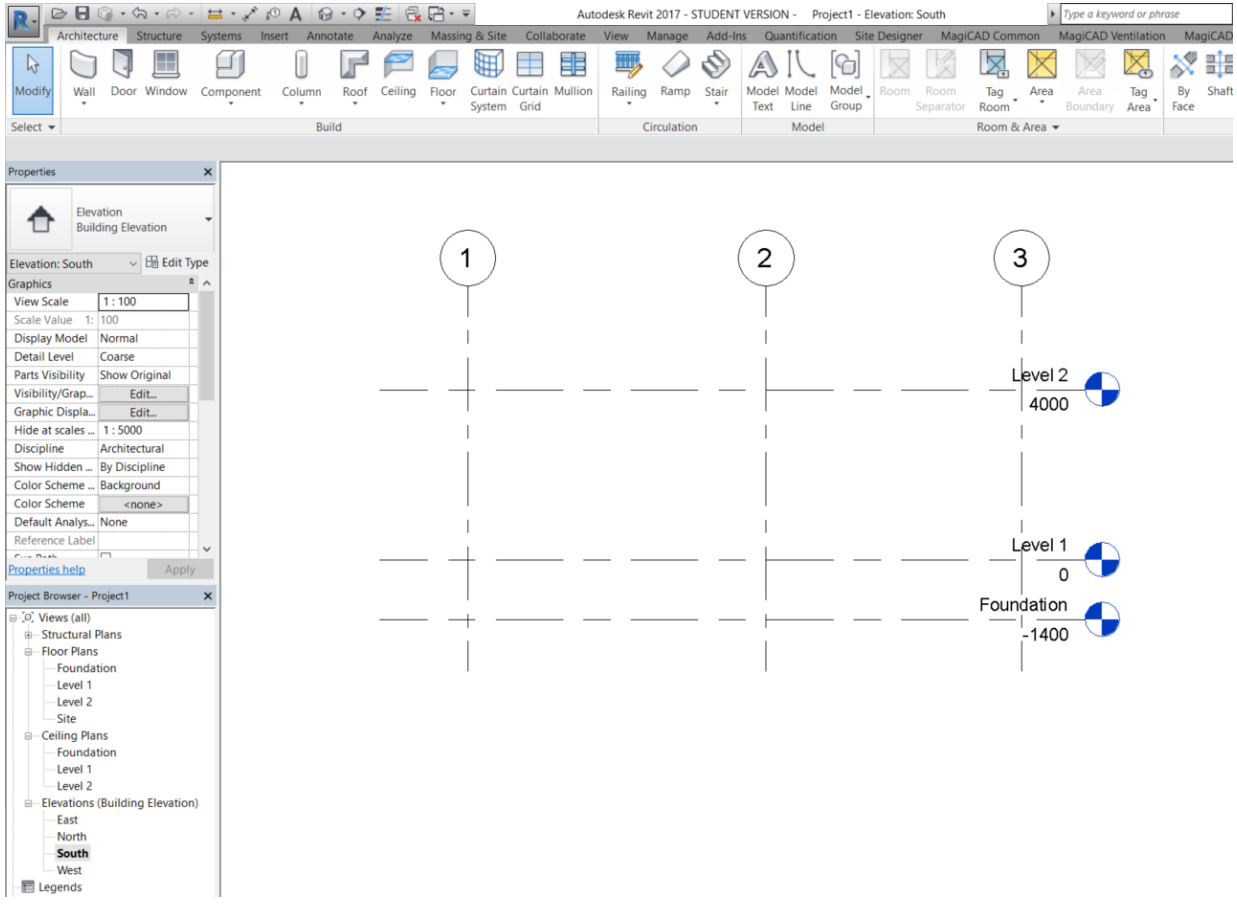

Autodesk Revit 2017 - STUDENT VERSION - Project1 - Floor Plan: Level 1
Modify | Grids
Properties
Project Browser - Project1
1
2
3
A
B
9000.0
Grids : Grid : B


1
2
3
A
B
7000.0
6000.0

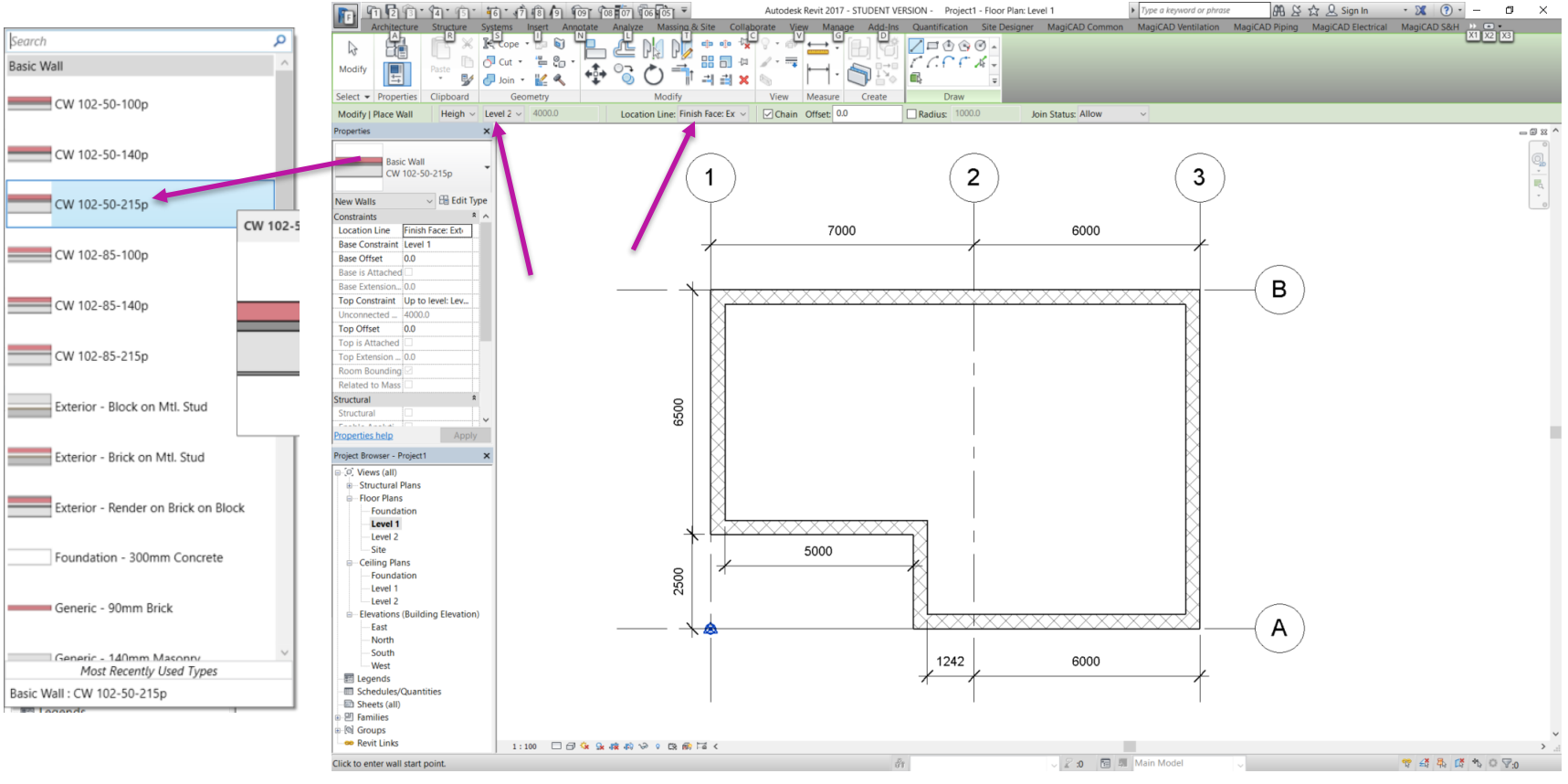
Foundation level

Go to south elevation and create a new level for foundation at -1400

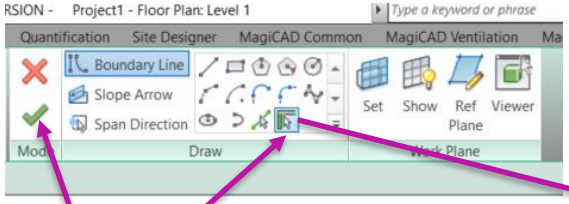
(Architecture > Datum >level)

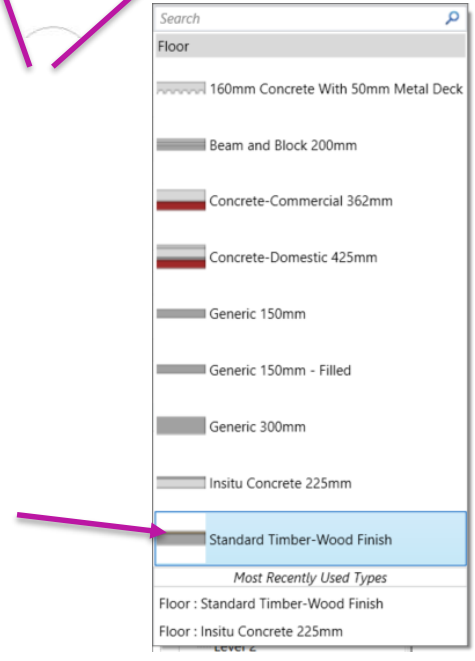


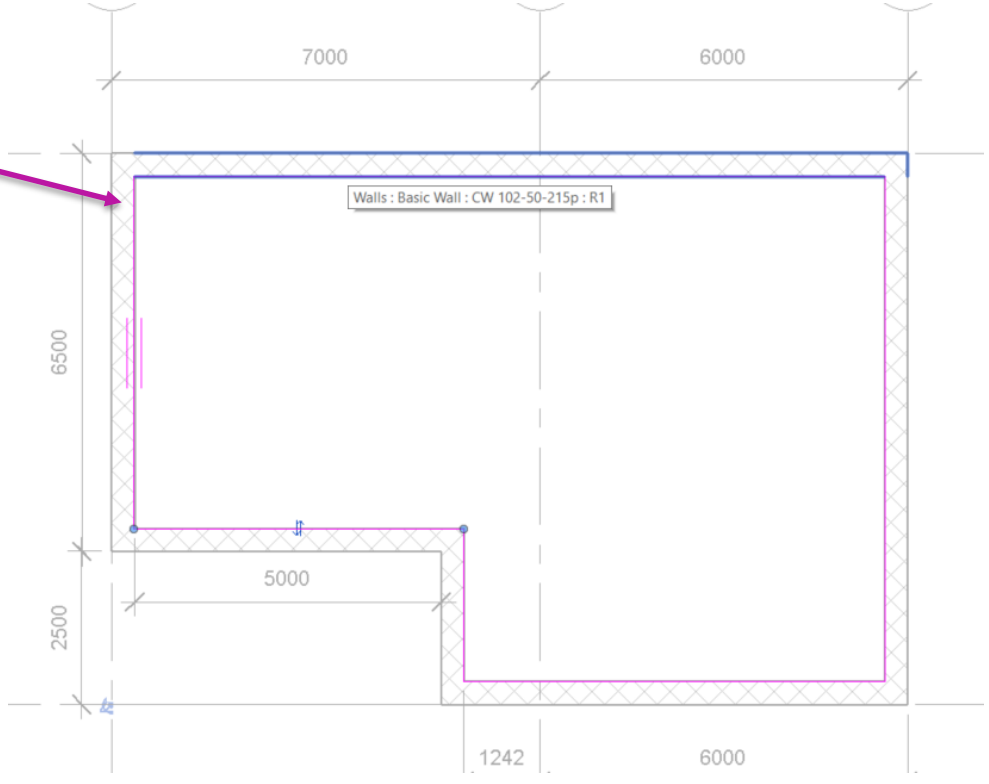
Make a space (select wall type – CW 102-50-215p)



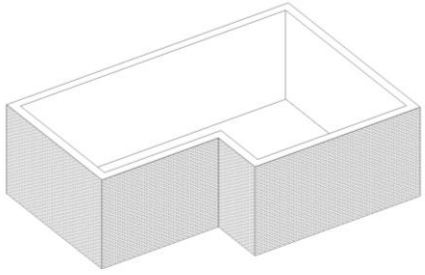
Select Architecture floor (and slab type)

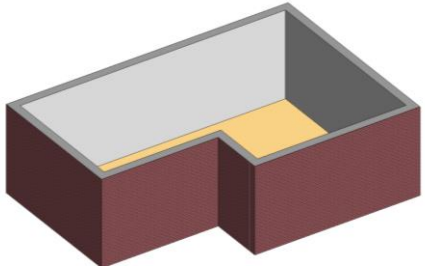


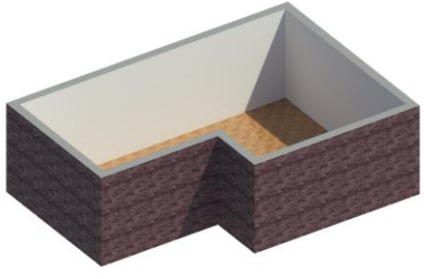


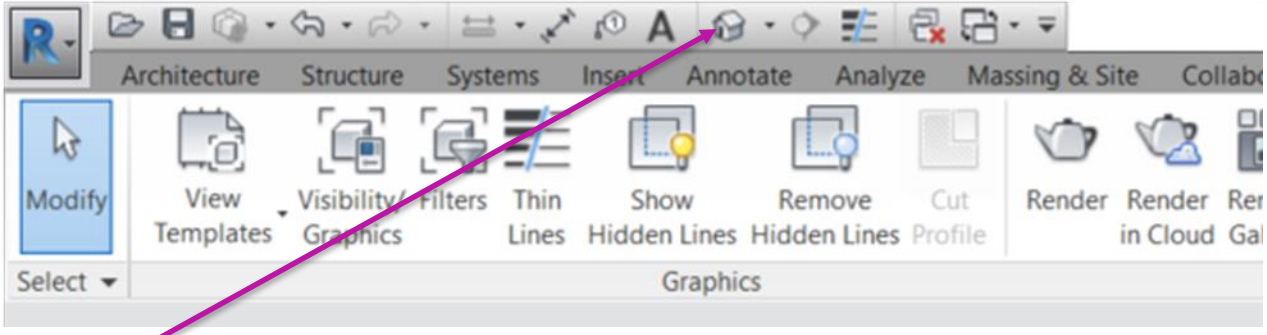


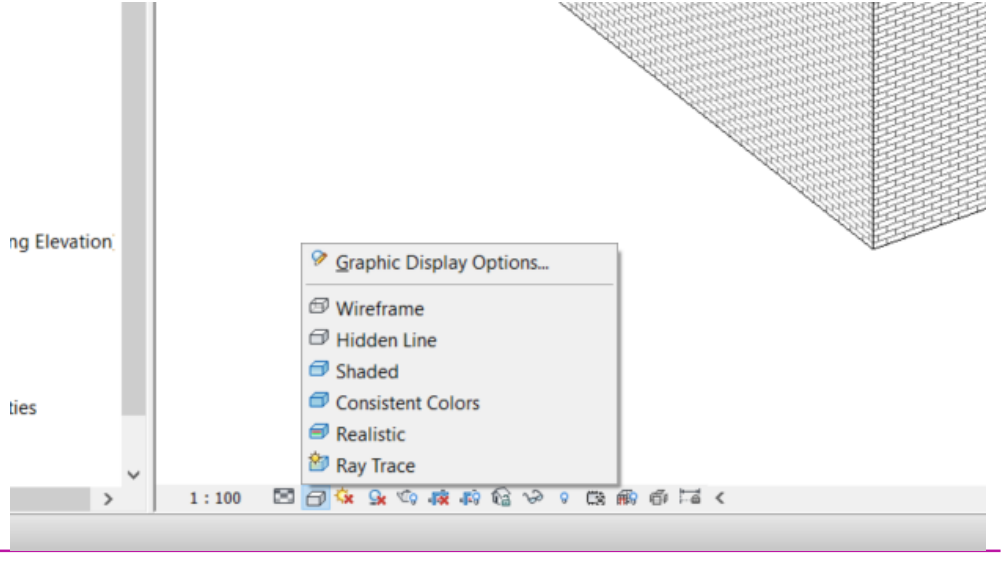
Check 3d view



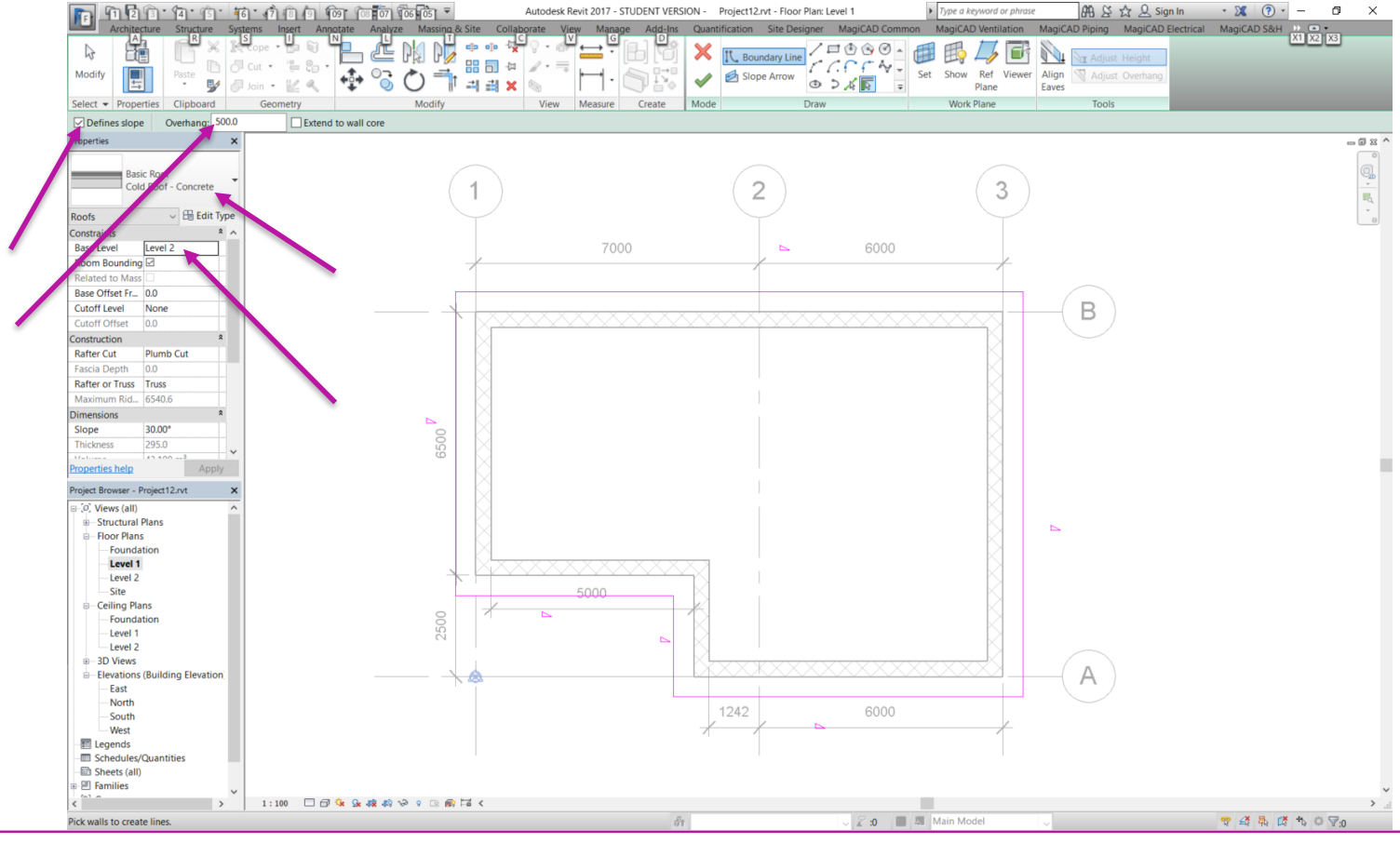






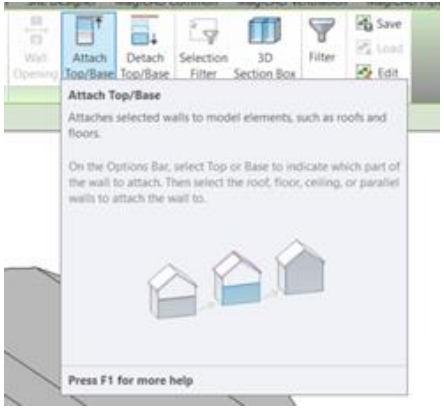


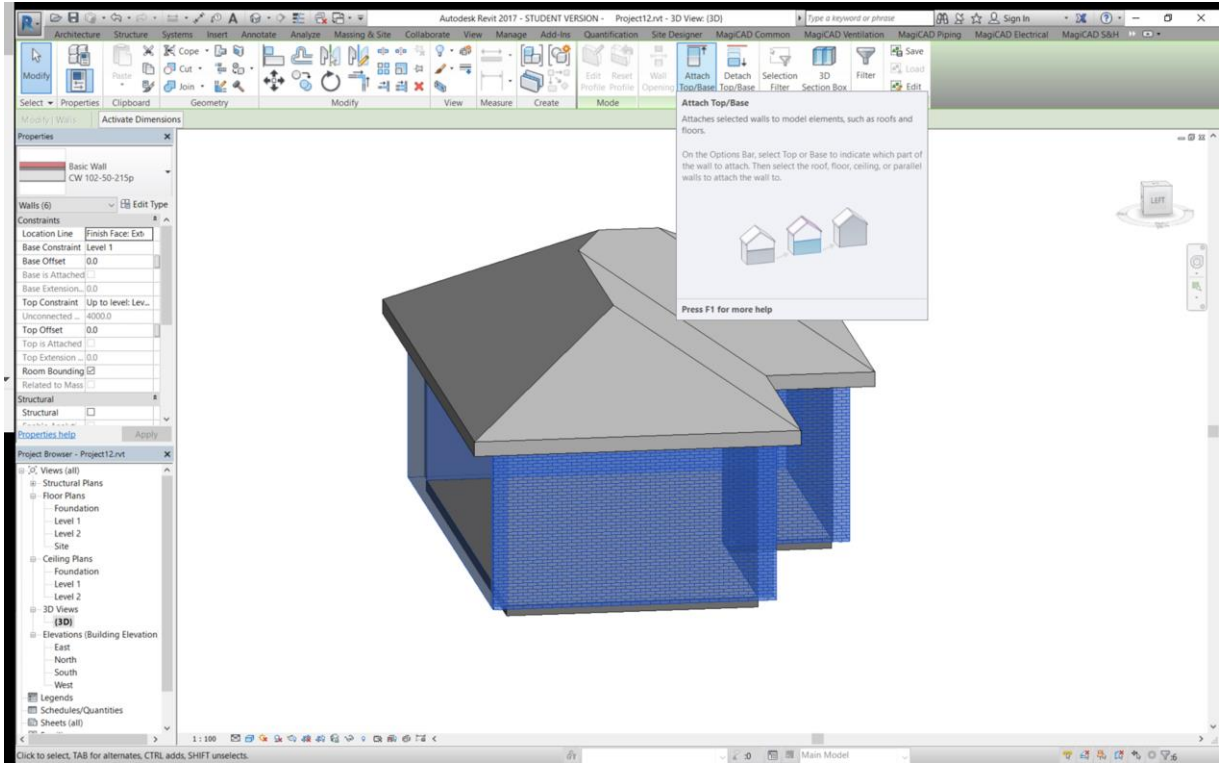
Roof


Autodesk Revit 2017 - STUDENT VERSION - Project12.rvt - Floor Plan: Level 1
Defines slope
Overhang: 500.0
Extend to wall core
Properties help
Apply
Project Browser - Project12.rvt
Views (all)
Structural Plans
Floor Plans
Foundation
Level 1
Level 2
Site
Ceiling Plans
3D Views
Elevations (Building Elevation)
East
North
South
West
Legends
Schedules/Quantities
Sheets (all)
Families
1
2
3
A
B
7000
6000
6500
5000
2500
1242
Pick walls to create lines.
Main Model

Attach walls with roof

Select all the walls and ”attach top/base”



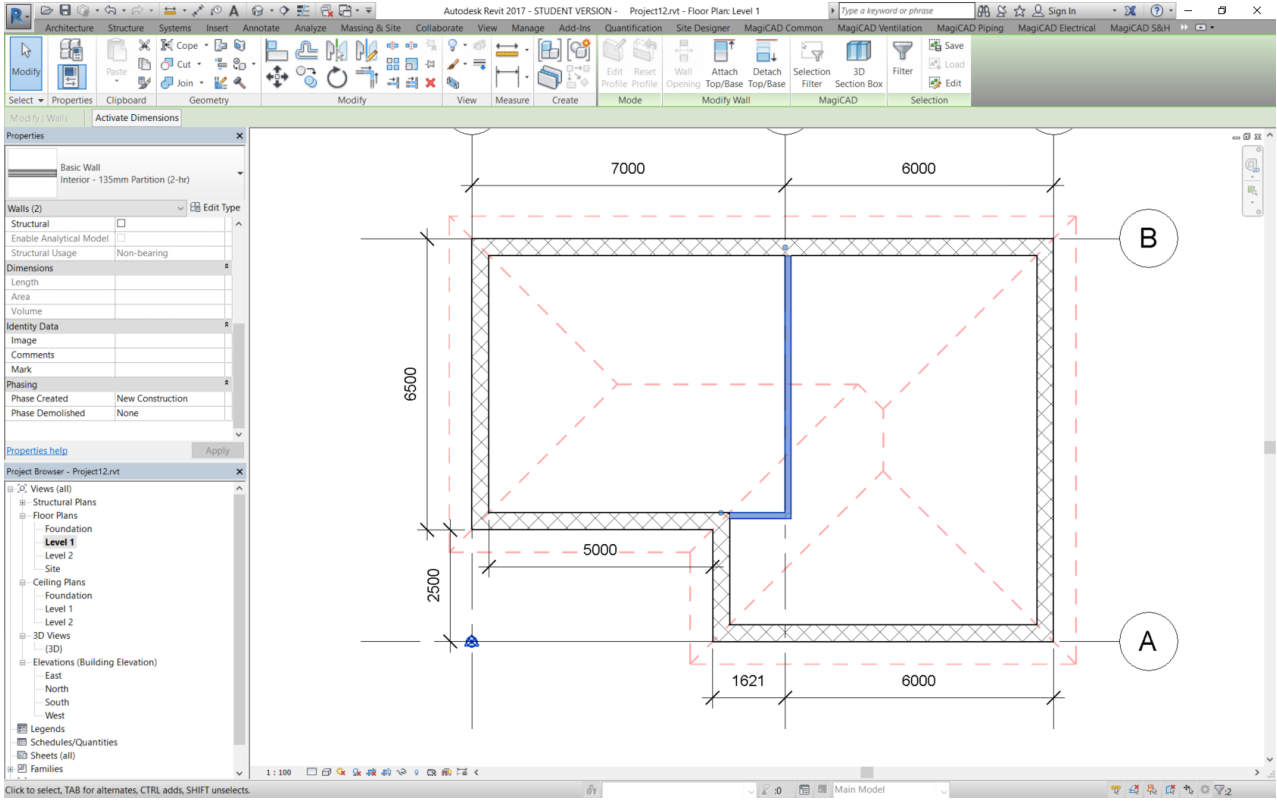


Internal partition walls

Draw basic interior partition walls as shown

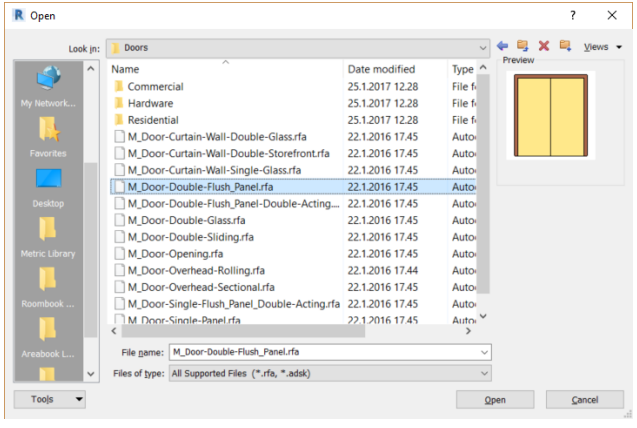
Make the roof lines visbile in Level 1

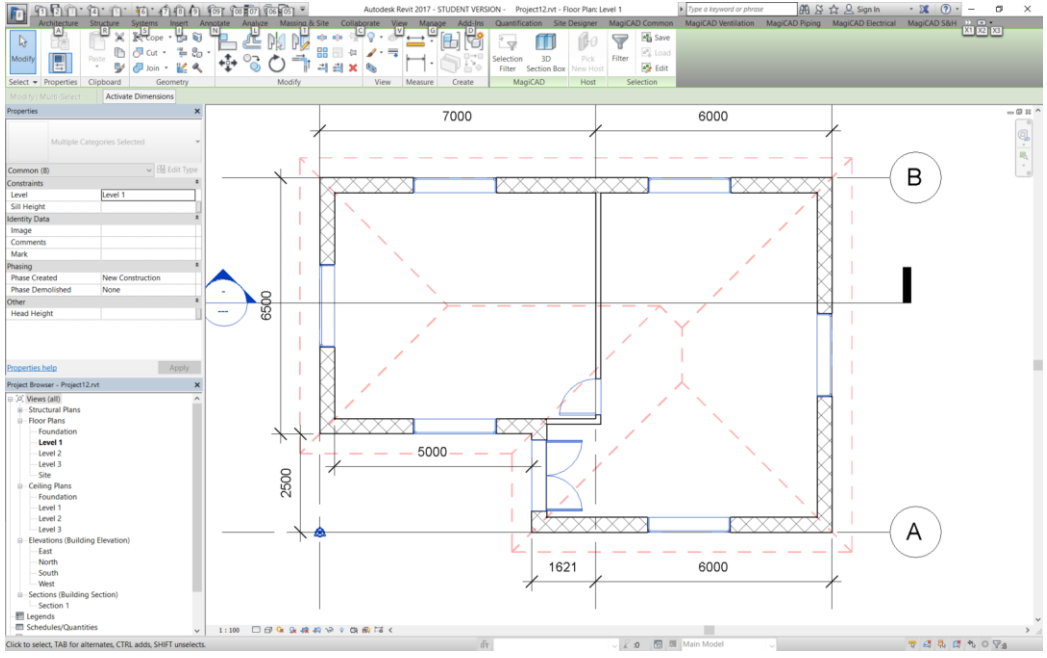
Attach the interior partition walls to the roof



Door and windows

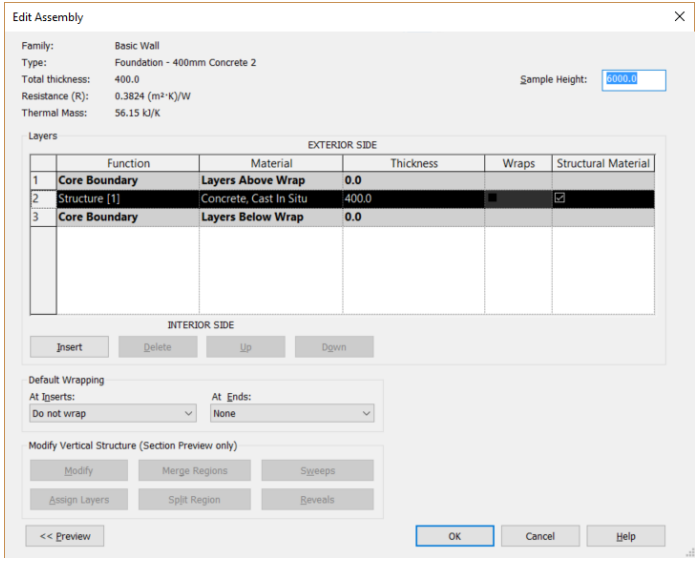
Put door and windows as needed. You can also load more door and window families from the revit library

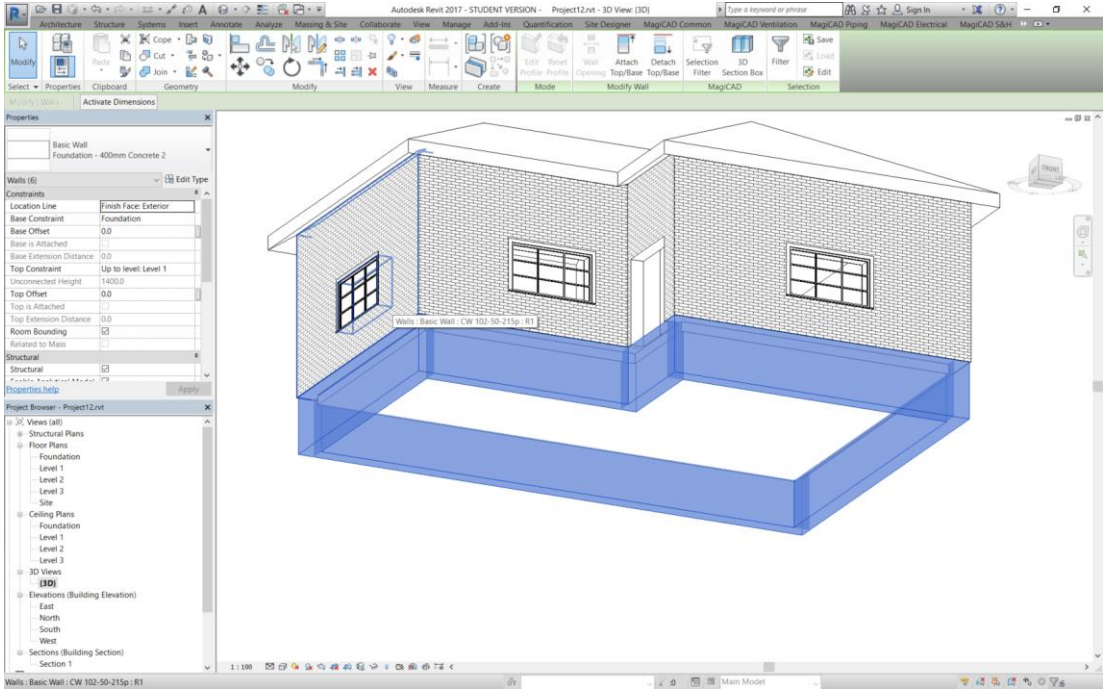




Foundation

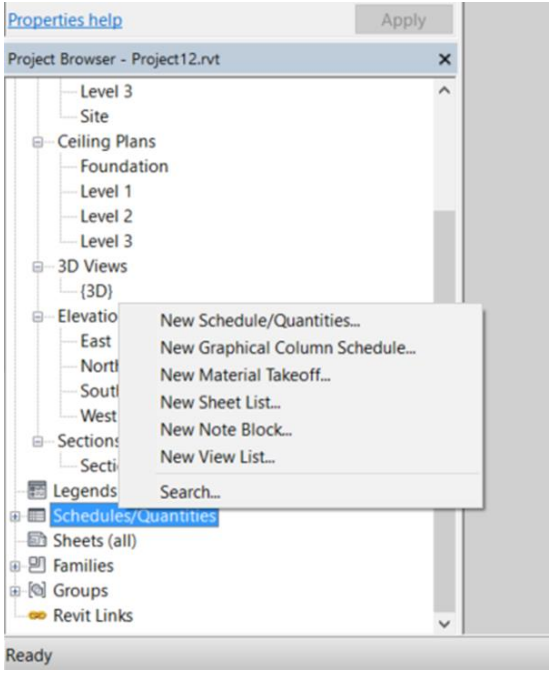
Create concrete foundation wall of 400 mm along the outer wall, constrain 25 mm from the exterior of outer wall

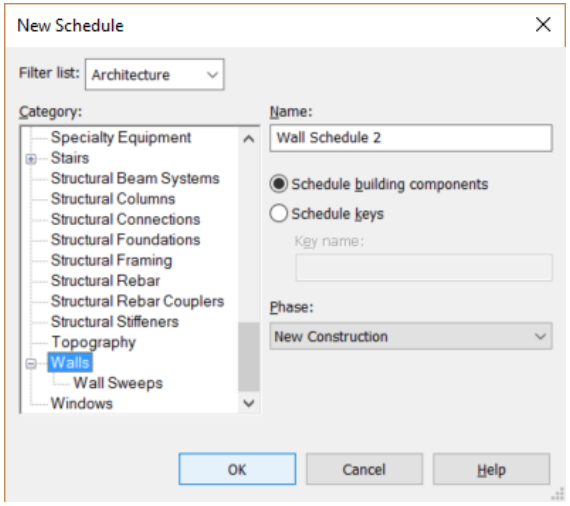


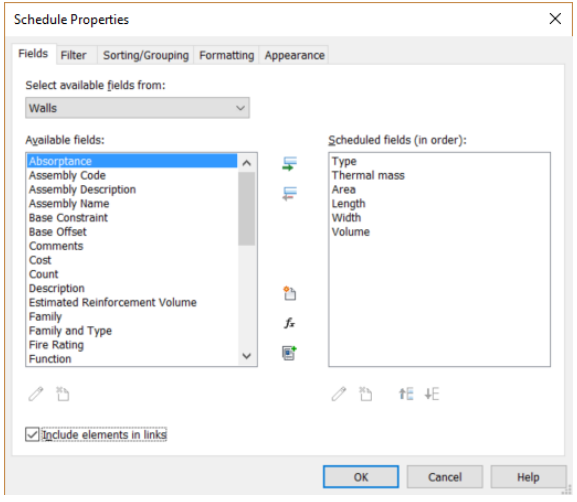


Finish the model as needed

Schedule





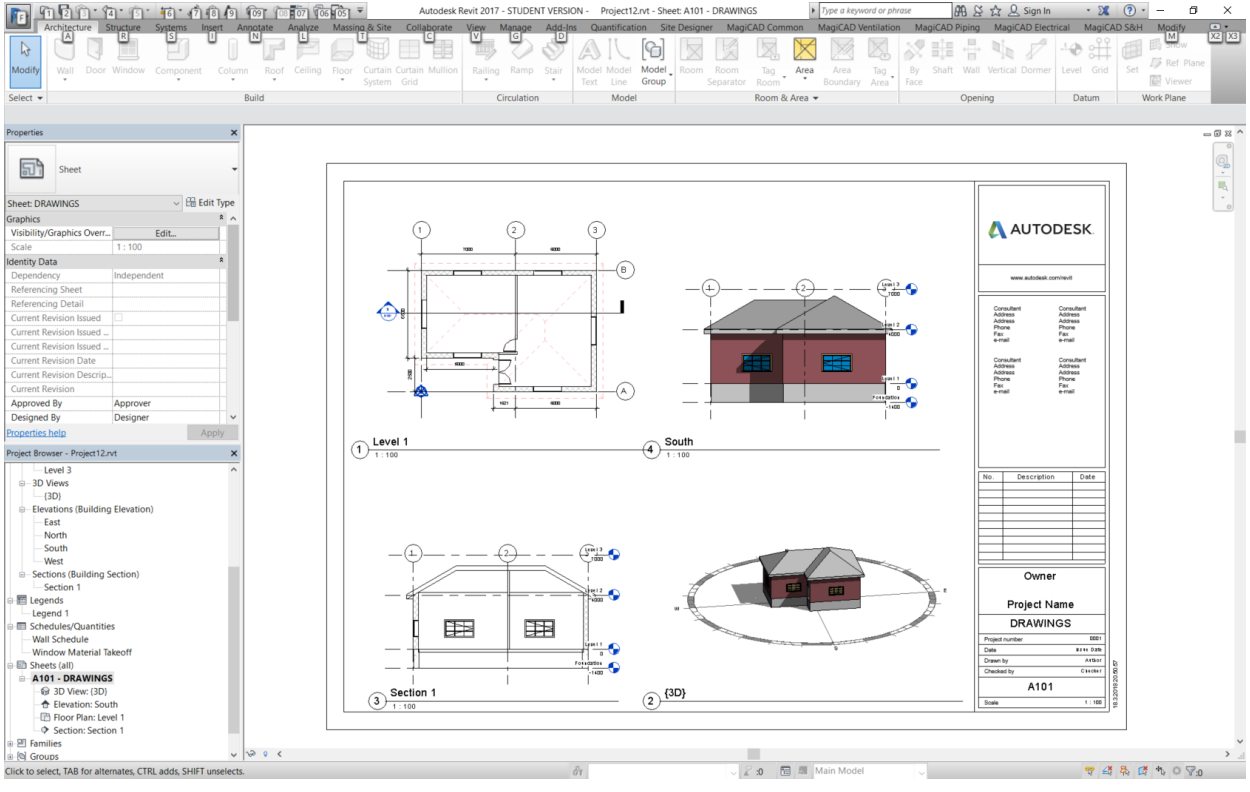


<Wall Schedule>

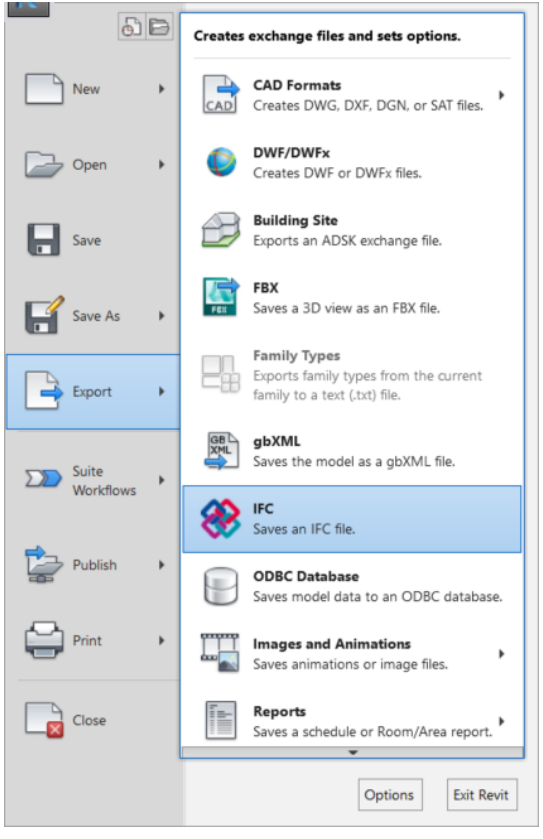
A	B	C	D	E	F
Type	Thermal mass	Area	Length	Width	Volume
CW 102-50-215	44.93 kJ/K	25 m²	6121	379	9.14 m²
CW 102-50-215	44.93 kJ/K	48 m²	12621	379	17.71 m²
CW 102-50-215	44.93 kJ/K	34 m²	8621	379	12.45 m²
CW 102-50-215	44.93 kJ/K	28 m²	7242	379	10.30 m²
CW 102-50-215	44.93 kJ/K	5 m²	2500	379	1.87 m²
CW 102-50-215	44.93 kJ/K	20 m²	5379	379	7.41 m²
Interior - 135m	6.14 kJ/K	6 m²	1499	136	0.86 m²
Interior - 135m	6.14 kJ/K	28 m²	5999	136	3.74 m²
Foundation - 40	56.15 kJ/K	9 m²	6050	400	3.61 m²
Foundation - 40	56.15 kJ/K	18 m²	12550	400	7.03 m²
Foundation - 40	56.15 kJ/K	12 m²	8550	400	4.79 m²
Foundation - 40	56.15 kJ/K	10 m²	7171	400	4.02 m²
Foundation - 40	56.15 kJ/K	4 m²	2500	400	1.40 m²
Foundation - 40	56.15 kJ/K	7 m²	5379	400	2.79 m²

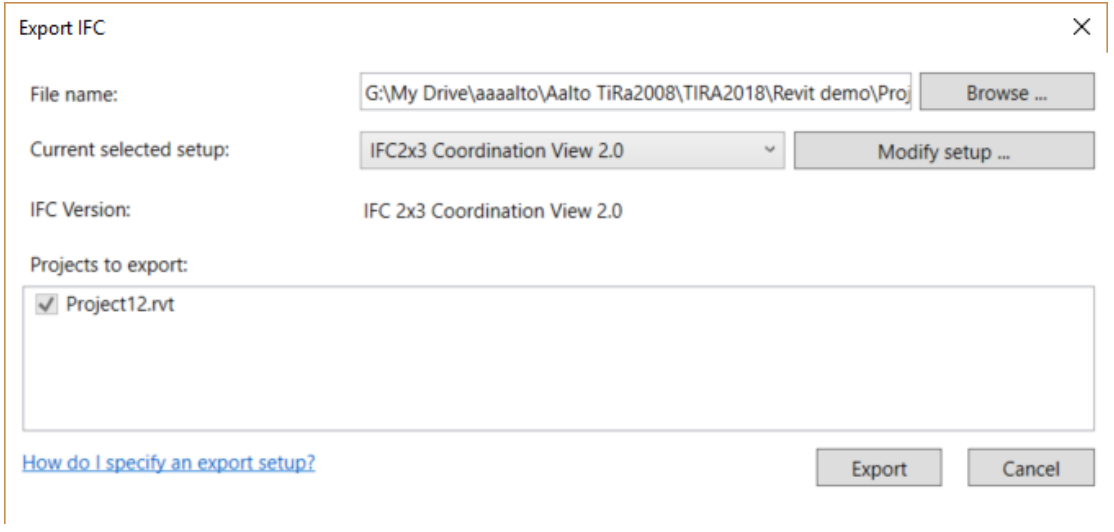
Drawings in revit

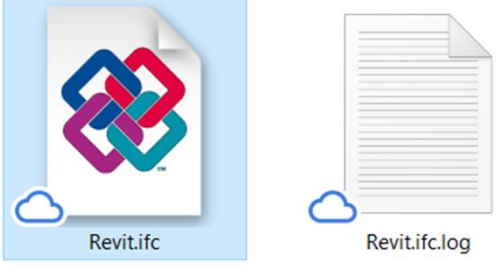
You can use ”Sheets” in Revit to put different views



IFC export

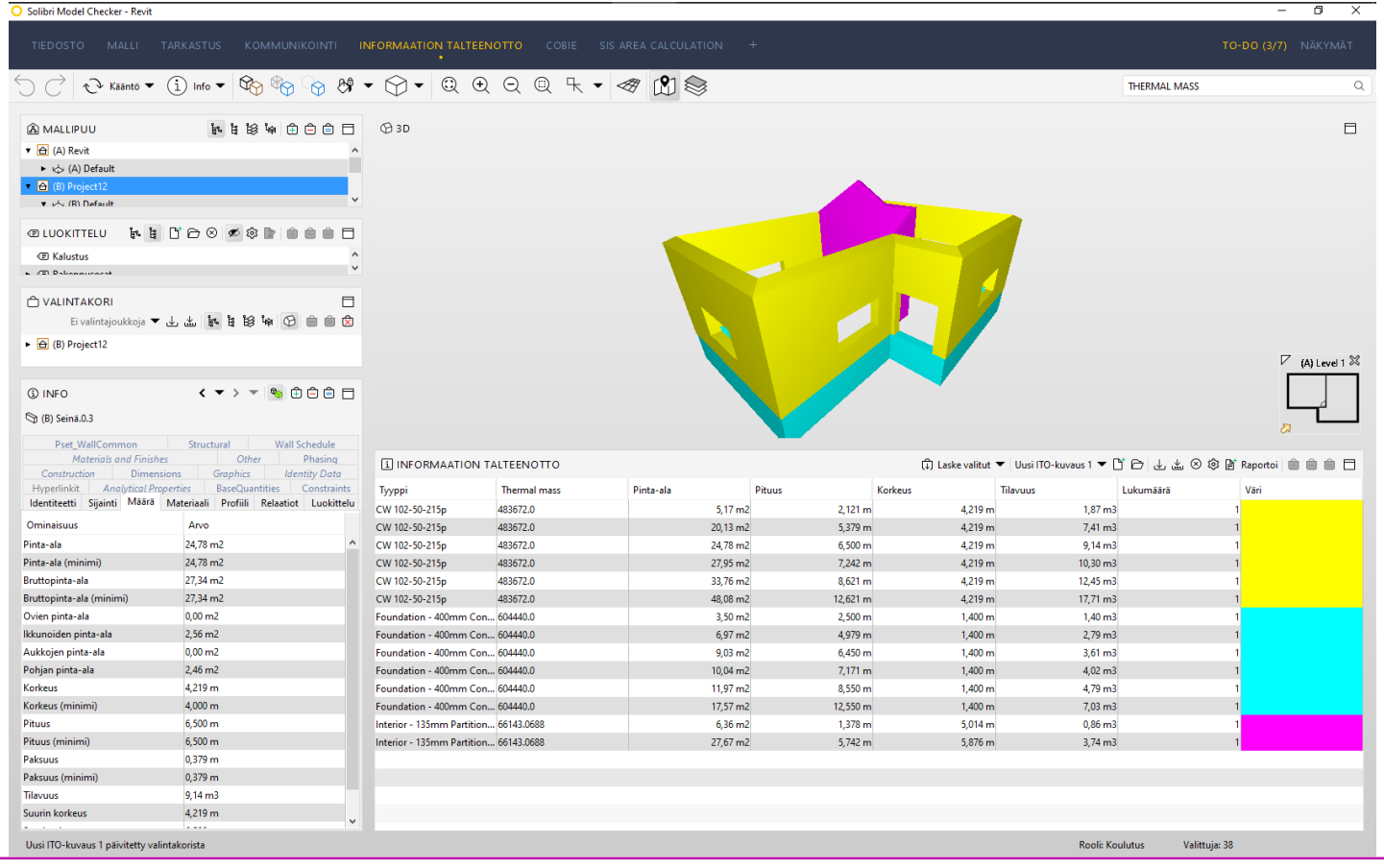






Check if similar information is available through solibri for the walls as in wall schedule of revit.

Report findings in solibri



Thank you