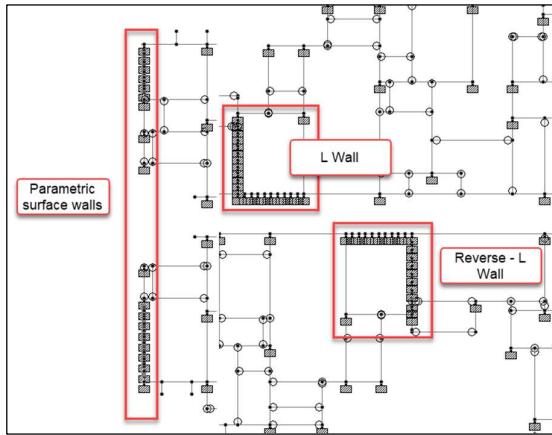


Facing issue in Level merging when there are walls modelled as Parametric Surface Walls –

Issue can occur when there are multiple Parametric surfaces in the structure with different Mesh sizes –

E.g. – The Left Edge wall has a different mesh size and the central L shaped walls have different Mesh size



What happens currently in RCDC when such model is imported –

Level Identification logic ---

The Y coordinate of each node that is identified from STAAD Model is assumed as a Level in RCDC

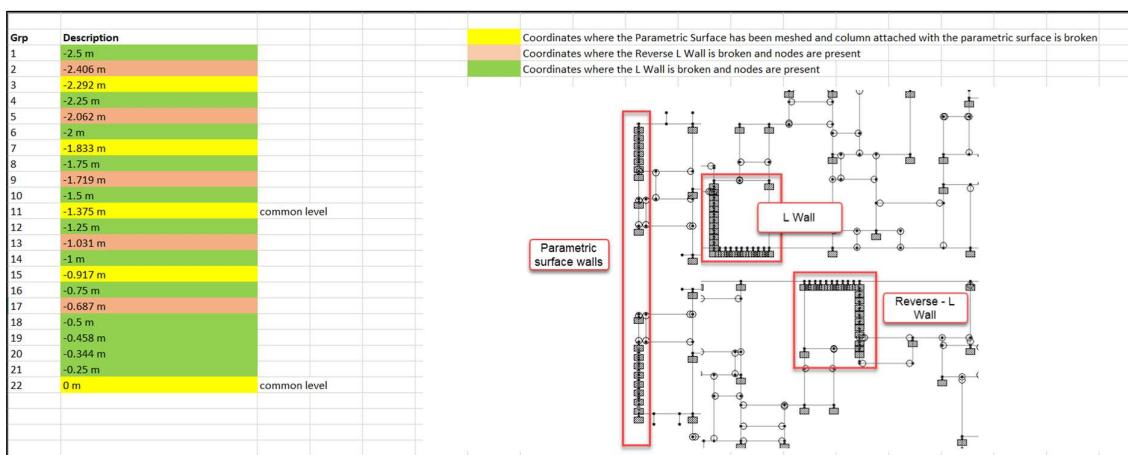
Column Reading logic ---

RCDC identifies the column at those levels where its Start node and End node is found.

Parametric Surface Wall Reading logic ---

Parametric surface is created internally at all the levels that are identified in RCDC as per the Node Y coordinate data.

Now if there are multiple Parametric Surface modelled, the meshing of each surface can / cannot be different. In cases where the meshing is different, the nodes are formed are at different levels where the other columns may neither have its start / end node.



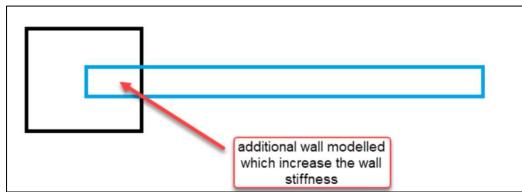
But in RCDC, as the column is only identified at its start-end node, there is 'Change in Geometry' found due to which RCDC doesn't allow to merge the levels.

Below are 2 solutions for creating the STAAD Model that we are suggesting as a workaround to such issue

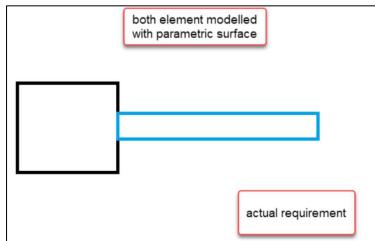
- a. Model the walls with symmetric surfaces. This will help to get the same levels in RCDC and then model the attached column beam geometry. We are sharing a small video for this solution for you reference ([Video 1](#) attached to be referred)
- b. Model the columns which are at the end of the Shear walls, too as parametric surface. The Length and Thickness of this parametric surface will be same as that of the column dimension. This will help to get the exact stiffness of the Combined wall that is expected. Below is the explanation of What and Why we are suggesting Method "b".

Modelling case 1 --- Column modelled at the end of a Parametric Shear wall ---

When the wall is modelled up to the centre of the column, some portion of the wall overlaps the column. In actual case wall should stop at face of the column.
However, in this case wall is modelled with more Depth than actual requirement and so stiffness of the wall is assumed more than the actual case ---



Modelling case 2 --- Parametric surface itself modelled with column dimension at the end of Parametric shear wall ---



We are sharing a video to show how the Modelling case 2 can be done in STAAD for reference ([Video 2](#) attached to be referred)