

Webinar Questions and Answers

- Q: How important is floor meshing in regard to distribution of beam forces and moments?
 A: It is very important; it is recommended that a slab have 4-8 mesh points to ensure the beam is being loaded correctly. For concrete structures, it is recommended that a tee beam be used to ensure the correct stiffness.
- 2. Q: How does meshing effect vertical load distribution in a one-way slab?

A: Vertical loads are transferred in a one-way slab in the direction of slab stiffness. The slab would need to be meshed for loads to transfer in the direction of the slab.

3. Q: Does auto-meshing effect load distribution on shear walls where horizontal non-uniform? A: Yes, it is recommended that the floor meshing be finer than the wall meshing to ensure proper loading distribution.

4. Q: Is there a way to edit the actual internal mesh nodes?

A: Users can save the mesh, export it to different formats (DXF), edit the mesh and re-import back into ETABS. In the near future, users will be able to update the mesh graphically without having to export/import the mesh.

5. Q: Can one mesh the plate/shell thickness itself?

A: Users can define layered shell properties and can assign a mesh. Extruding the shell object shows the thickness of the shell as meshed.

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6. Q: What type of mesh is better for ramps?

A: It is recommended that for ramps, users assign the following floor auto mesh options. Under Assign>Shell>Floor Auto mesh options, select Auto Cookie Cut Object into Structural Elements. Alternatively, in the same dialogue box, select Mesh Object into X by X elements.

Shell Assignment - Floor Auto Mesh Options
Floor Meshing Options
◯ Default
O For Defining Rigid Diaphragm and Mass Only (No Stiffness - No Vertical Load Transfer - Applies to Horizontal Floors Only)
○ No Auto Meshing (Use Object as Structural Element)
O Mesh Object Into by Elements (Applies for 3 or 4 noded objects only with no curved edges)
Auto Cookie Cut Object into Structural Elements
 Mesh at Beams and Other Meshing Lines (Applies to Horizontal Floors Only) Mesh at Vertical/Inclined Wall Edges (Applies to Horizontal Floors Only) Mesh at Visible Grids (Applies to Horizontal Floors Only) Further Mesh Where Needed to Maximum Element Size of
Add Restraints on Edge if Corners have Restraints
OK Close Apply