Andhra Pradesh State Skill Development Corporation

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ARCHITECTURAL MODELING USING REVIT

OPENINGS

OPENINGS

RECTANGULAR OPENING IN A WALL

1. Open an elevation or section view where you can access the wall that will host the opening.
2. Click Architecture tab Opening panel select rectangular wall opening option
3. Select the wall that will host the **opening**.
4. Sketch a rectangular **opening,** after you specify the final point of the opening, the opening displays.
5. To modify an **opening**, click Modify, and select the **opening**.
6. You can use the drag controls to modify the size and location of the opening. You can also drag it to a new location on the same wall, and add dimensions to the opening.

CUT AN OPENING IN A FLOOR, ROOF, OR CEILING

BY FACE / VERTICAL OPENING

Use one of the Opening tools to cut a vertical or perpendicular opening in a roof, floor, or ceiling (for example, to accommodate a chimney). You can cut openings in the faces of these elements, or you can select the entire element to make a vertical cut.

1. Open Architecture tab Opening panel.
2. Click By Face or Vertical.
3. Use the By Face option when you want the opening to be perpendicular to the selected face.
4. If you chose By Face, select a face in the floor, ceiling, or roof.
5. In the **options bar** just below ribbon bar we can find various options like
   Chain option which allows the chainage (continuity) in drawing lines or arcs
   Offset- to give the offset distance
   Radius- if we require curved/smooth corners
6. **Draw tools** will be activated in the ribbon bar.
7. By using draw tools, we have to specify the shape of the opening.
8. After completing the required shape then Click on finish option.

SHAFT OPENING

Use the Shaft tool to place an opening that extends through the entire height of a building (or through selected levels), cutting through the faces of roofs, floors, or ceilings simultaneously.

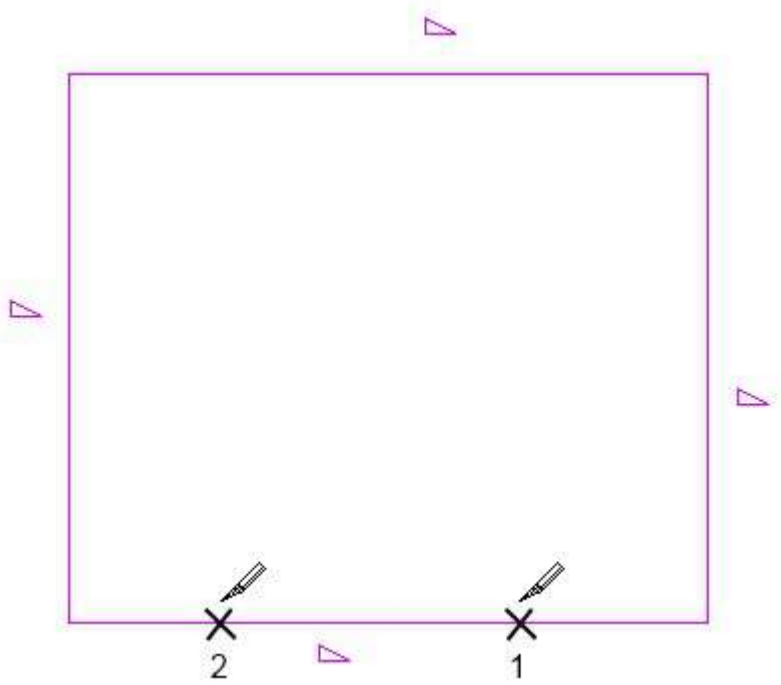
1. Click the Architecture tab Opening panel select Shaft.
2. Sketch a shaft opening by drawing lines or by picking walls (**Draw tools** will be activated in the ribbon bar.)
3. Typically, you will want to sketch the shaft on a host element, such as a floor, in a plan view.
4. By default, the Base Constraint for the shaft is the level of the current activated plan view.
5. When you are done sketching the shaft, click Finish Opening.

6. To adjust the levels that the opening cuts, select it, and make the following adjustments on the Properties palette
   For Base Constraint, specify a level for the start point of the shaft.
   For Top Constraint, specify a level for the end point of the shaft.
7. The shaft opening is mainly used for staircase area, it can be cut into roofs and ceilings.

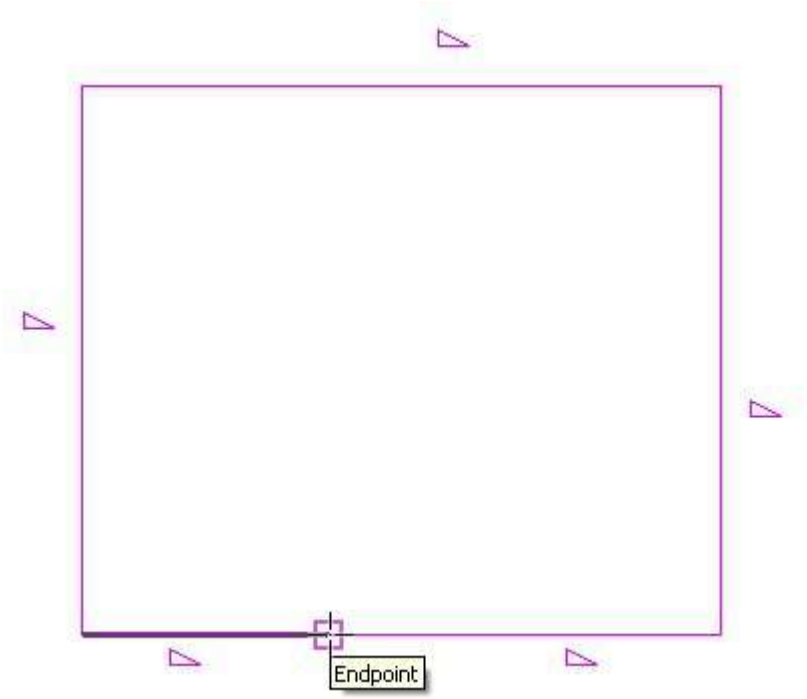
Create a Dormer Using Slope Arrows

To create a dormer that consists of a smaller roof with no side walls, modify the roof sketch and use slope arrows.

1. Sketch a roof footprint with slope-defining lines, or select an existing roof and click Edit Footprint.
2. While in sketch mode, click Modify | Create Roof Footprint tab ➤ Modify panel ➤ (Split Element).
3. Split one of the lines in the footprint at 2 points, creating a middle line segment (the dormer segment), and then click Modify.

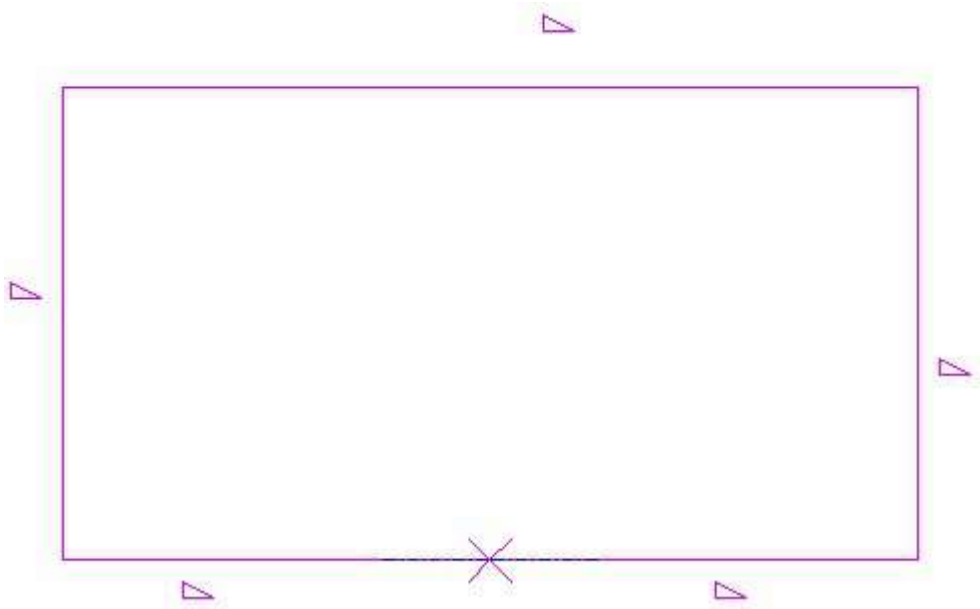


4. If the dormer segment is slope-defining ( ), select the line, and on the Properties palette, clear Defines Roof Slope.
5. Click Modify | Create Roof Footprint tab ➤ Modify panel ➤ (Slope Arrow), and sketch a slope arrow from one end of the dormer segment to its midpoint.



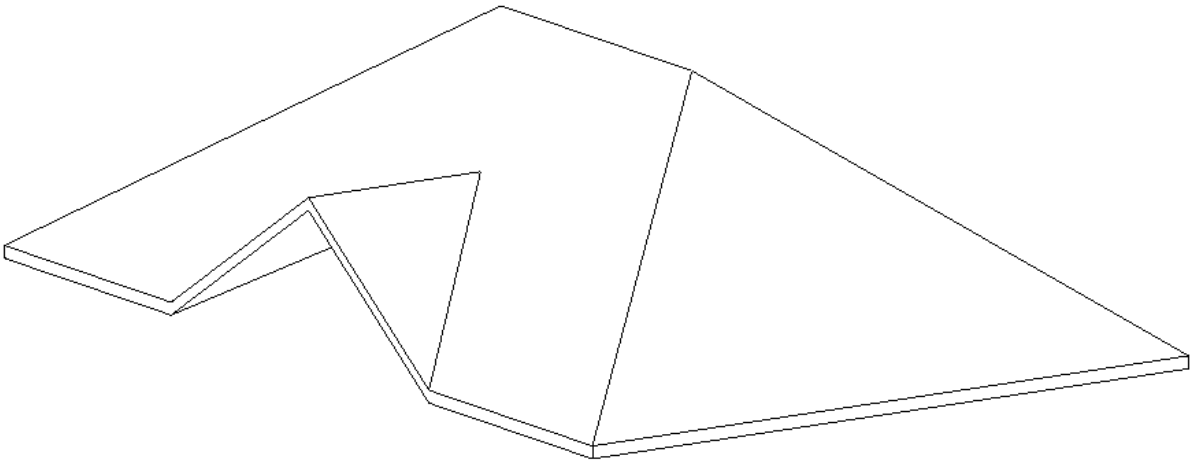
Correct placement of cursor for slope arrow

6. Click Slope Arrow again, and sketch a second slope arrow from the other end of the dormer segment to its midpoint.



Properly sketched slope arrows

7. Click ✔ (Finish Edit Mode), and open a 3D view to see the results.



Hip roof with dormer

EDIT OPENINGS

1. Select the opening profile path then you will get the Edit sketch option in the ribbon bar.
2. Click on the Edit sketch button / option.
3. Ribbon bar will be changed and you will get a draw toolbar window.
4. By using draw tools, draw the required shape of opening, then click on the finish option.
5. The remaining openings are the same process.