Chief Architect
Architectural Home Design Software

Creating a Vaulted Ceiling and Scissor Trusses

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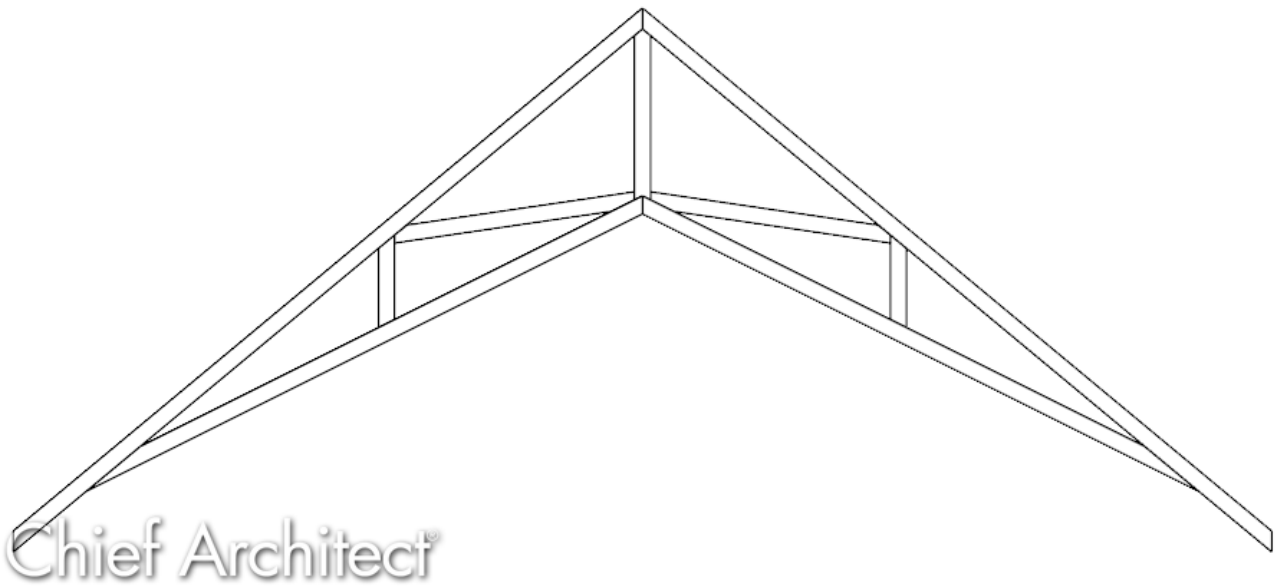
The information in this article applies to:

PREMIER | PRO

QUESTION

How do I create a vaulted ceiling and scissor trusses?



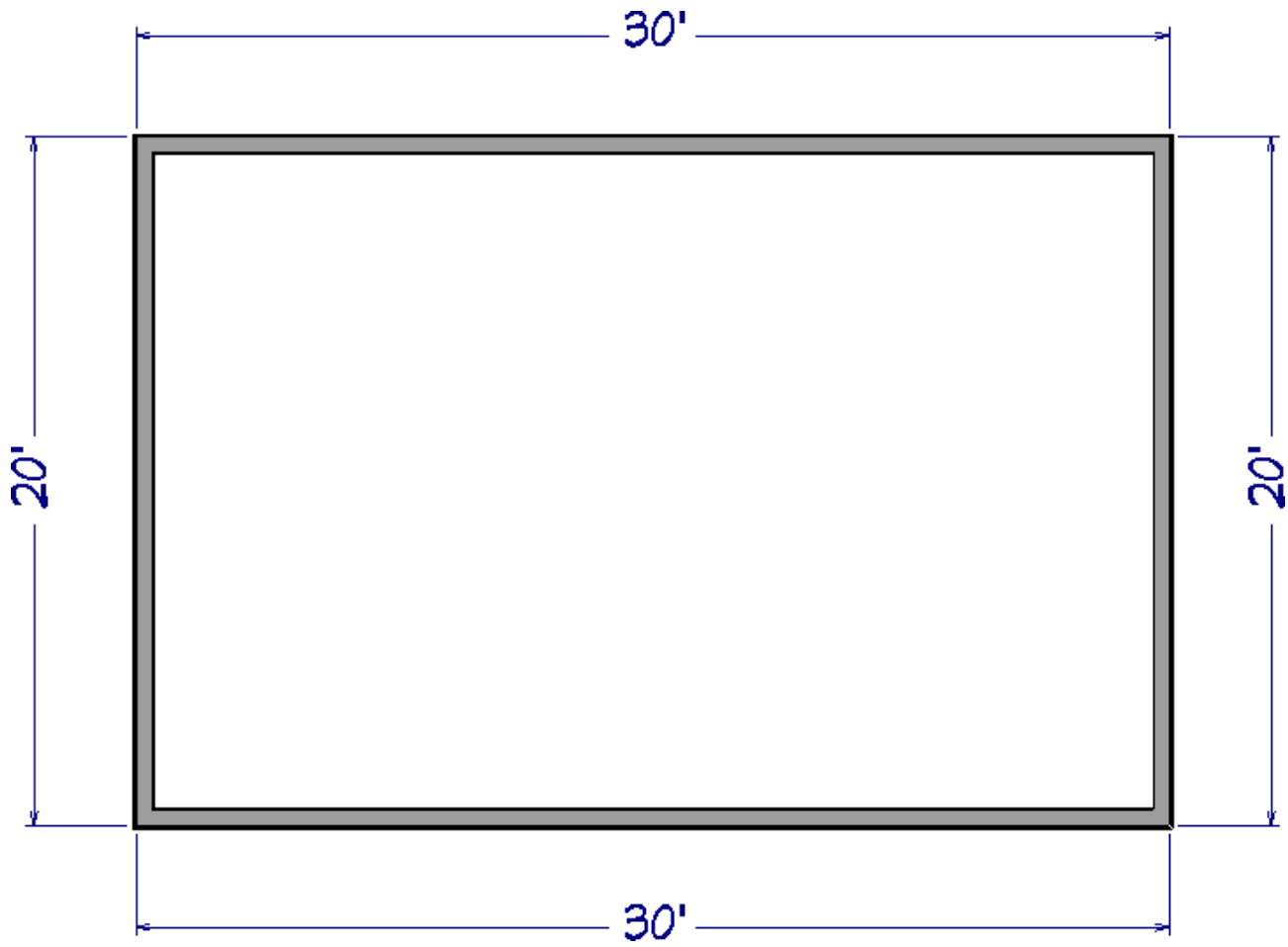
ANSWER

In Chief Architect, roof trusses are generated in the space between roof planes and ceiling planes. When a vaulted ceiling has a different pitch than the roof planes above, scissor trusses are produced.

To build the structure and roof

1. Launch Chief Architect, select **Open Plan** , and open the Chief Architect plan in which you would like to create scissor trusses.

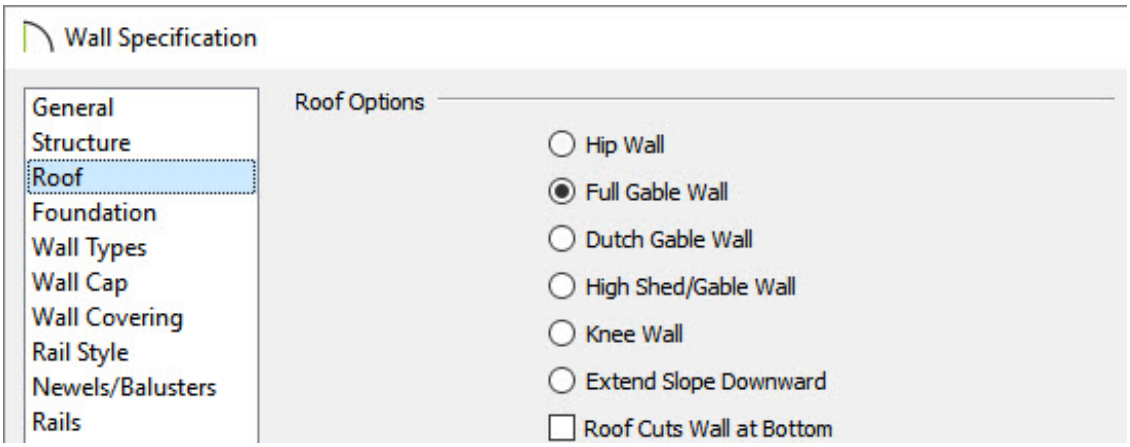
   In this example, a simple 20' x 30' rectangular plan is used.



2. Using the **Select Objects** tool, select the walls that you would like to make gable walls, then click the **Open Object** edit button.

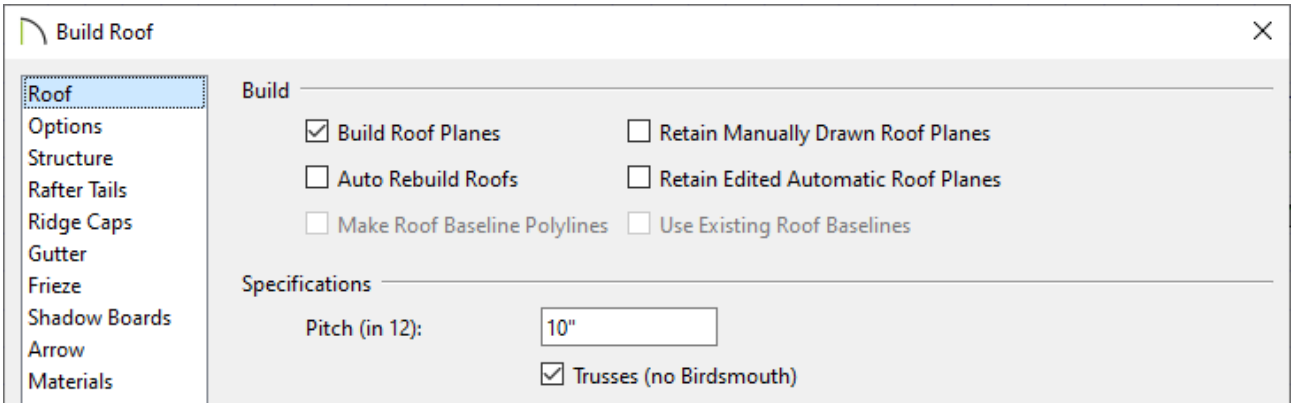
   In this example, the left and right walls were selected and opened.

3. On the Roof panel of the **Wall Specification** dialog, select the **Full Gable Wall** option and click **OK**.



> **Note:** You can also use the Change to Gable Wall(s) edit tool to convert hip walls to gable walls without having to open the Wall Specification dialog.

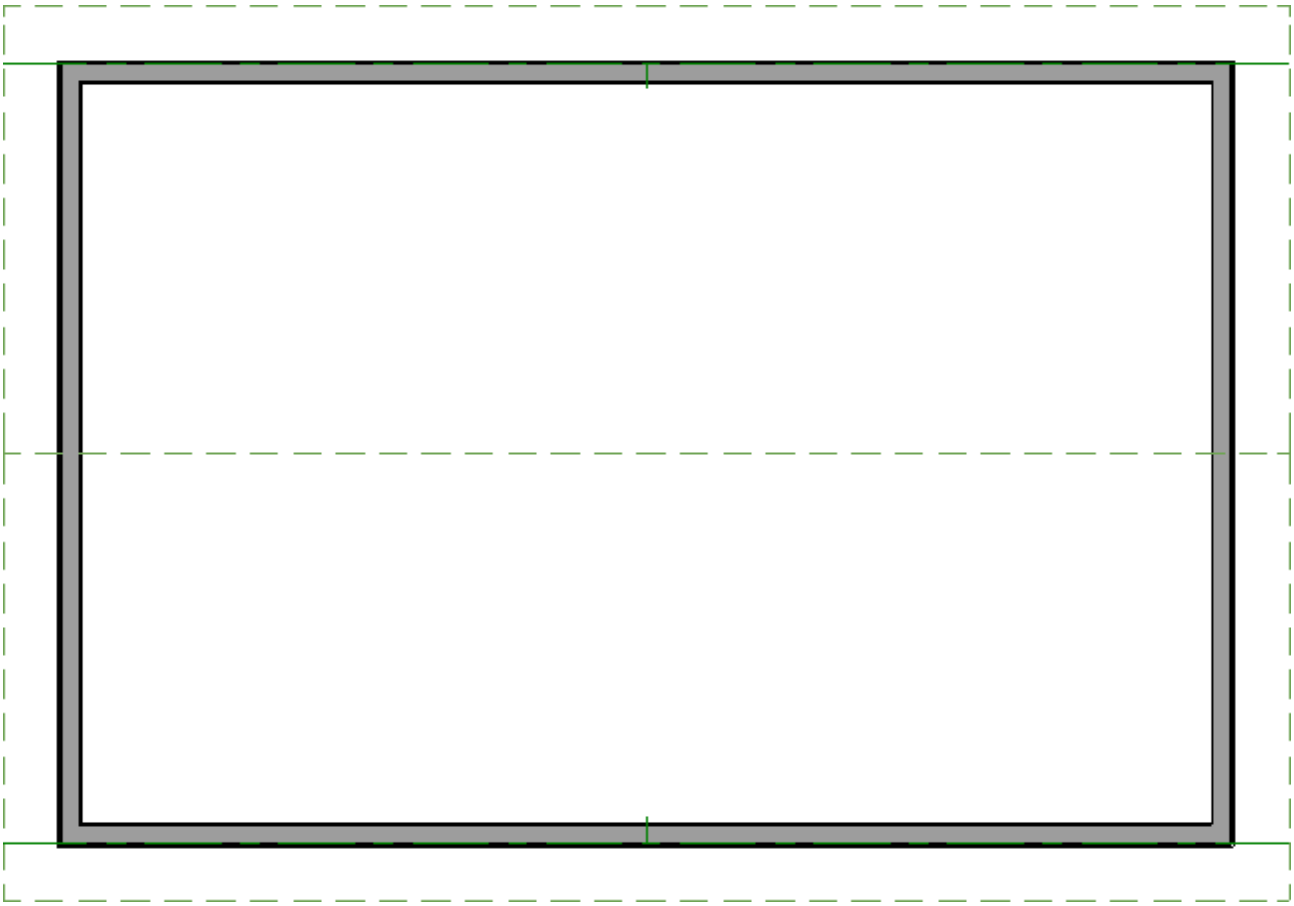
4. Select **Build> Roof> Build Roof** and on the Roof panel of the **Build Roof** dialog that displays:



- Check **Build Roof Planes**.
- Set the desired **Pitch (in 12)**.

  In this example, a 10" in 12 pitch is used.
- Check the **Trusses (no Birdsmouth)** box.

- Click **OK** to build the roof.

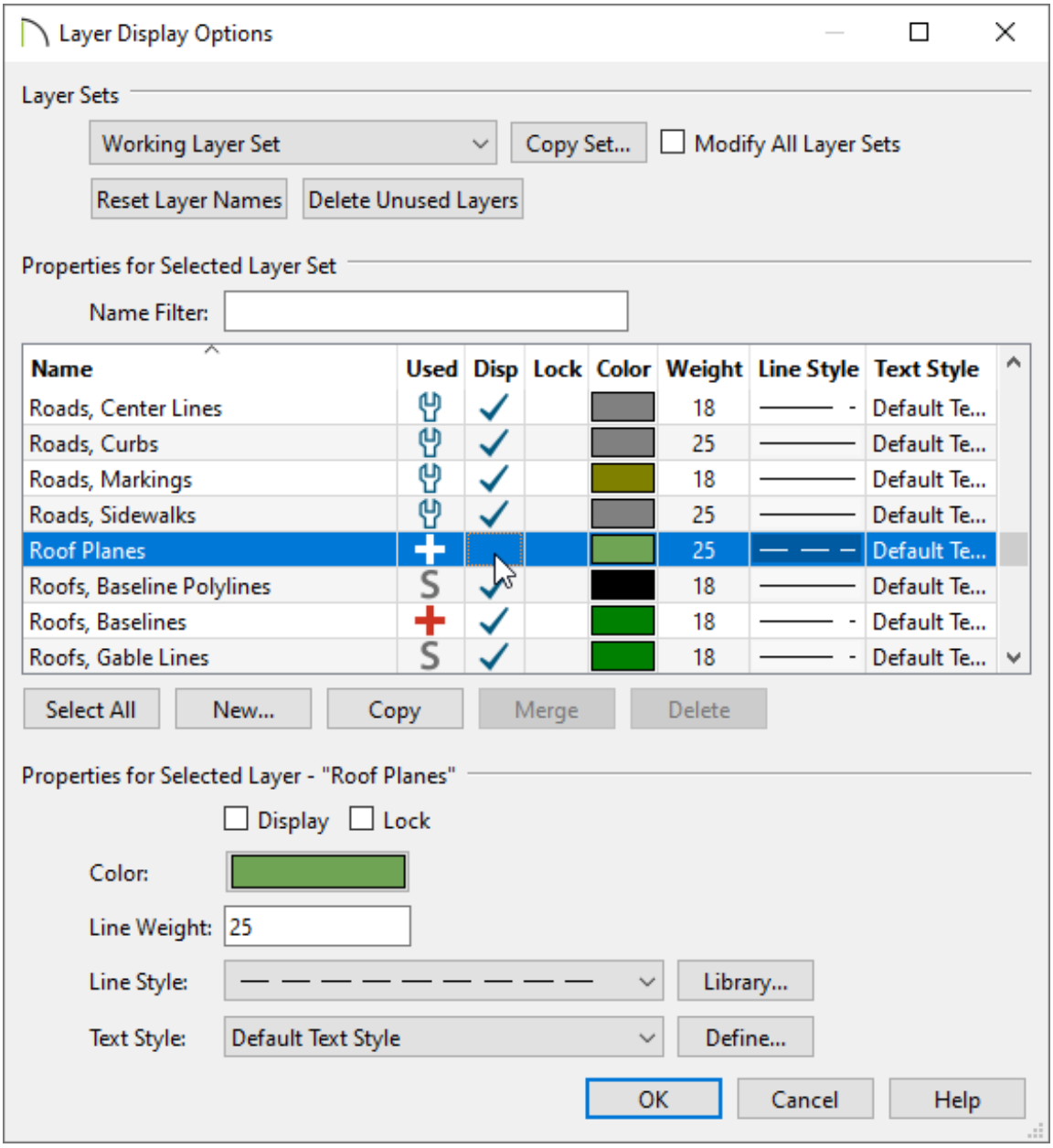


To build the ceiling

1. Using the **Select Objects** tool, click in the room that will have a vaulted ceiling to select it, then click the **Open Object** edit button.

2. On the STRUCTURE panel of the **Room Specification** dialog, uncheck **Flat Ceiling Over This Room**, then click **OK**.

3. To make it easier to draw ceiling planes, select **Tools> Layer Settings> Display Options** and in the **Layer Display Options** dialog for the active layer set:



- Scroll down to the Roof Planes layer and remove the check in the **Disp** column or from the **Display** checkbox.

- Click **OK** to close the dialog and turn off the display of the roof planes in the plan.

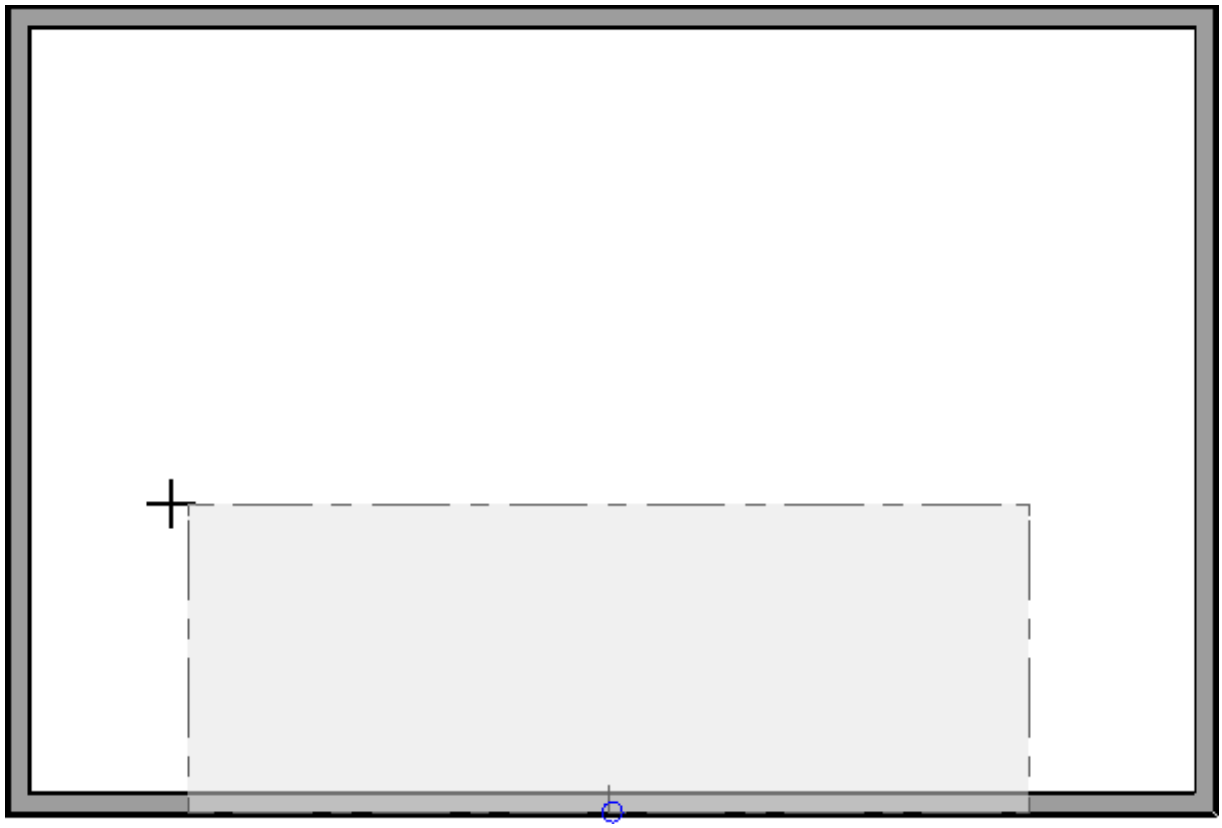
4. Select **Build> Roof> Ceiling Plane** from the menu.

   - Click and drag a baseline along the outside of a wall defining the room that will have a vaulted ceiling.

   - For best results, the baseline should be along the outside edge of the framing layer of that wall.

   - When the baseline is complete, click once in the room to set the ceiling planes

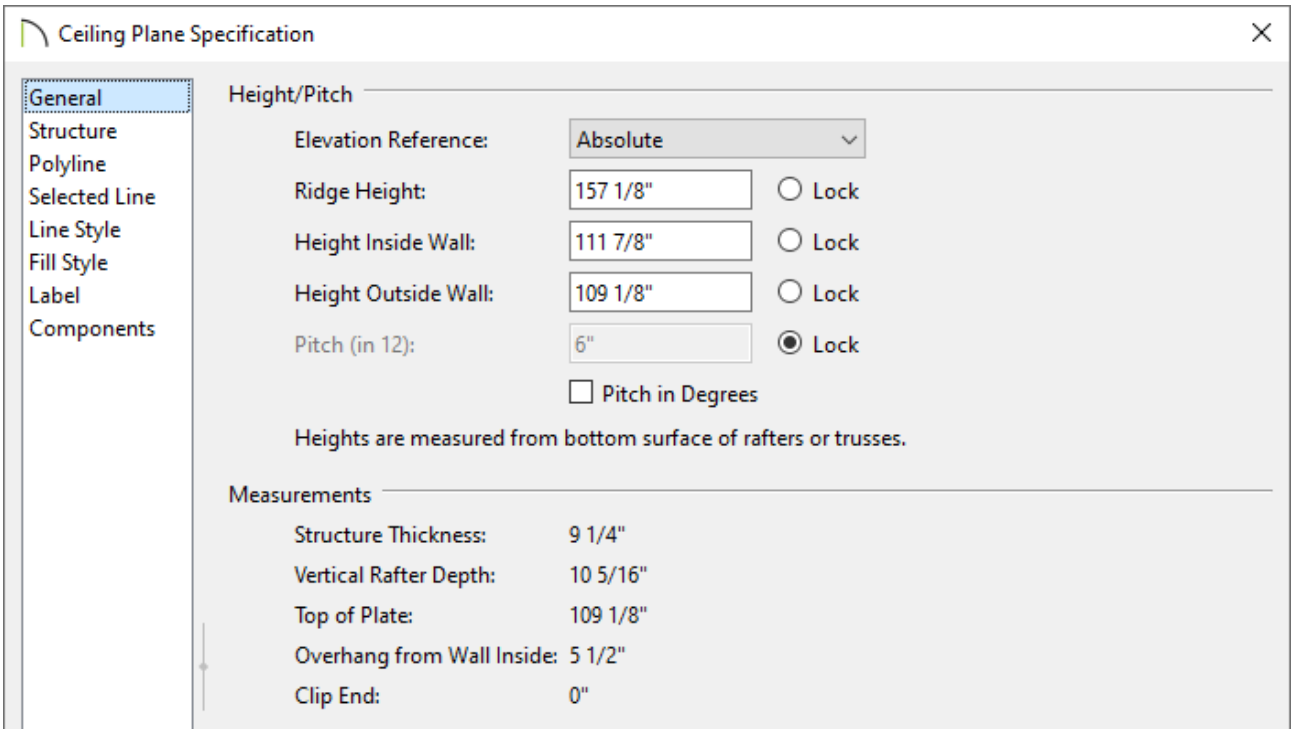
ridge.



5. Click on the ceiling plane to select it, then use the edit handles that display to stretch it across the room to the inside surfaces of the gable walls.

   In this example, two ceiling planes will form a ridge in the center of the room, so make sure the ridge edge of this plane does not extend past the middle of the room.

6. With the ceiling plane still selected, click the **Open Object** edit button and on the GENERAL panel of the **Ceiling Plane Specification** dialog:



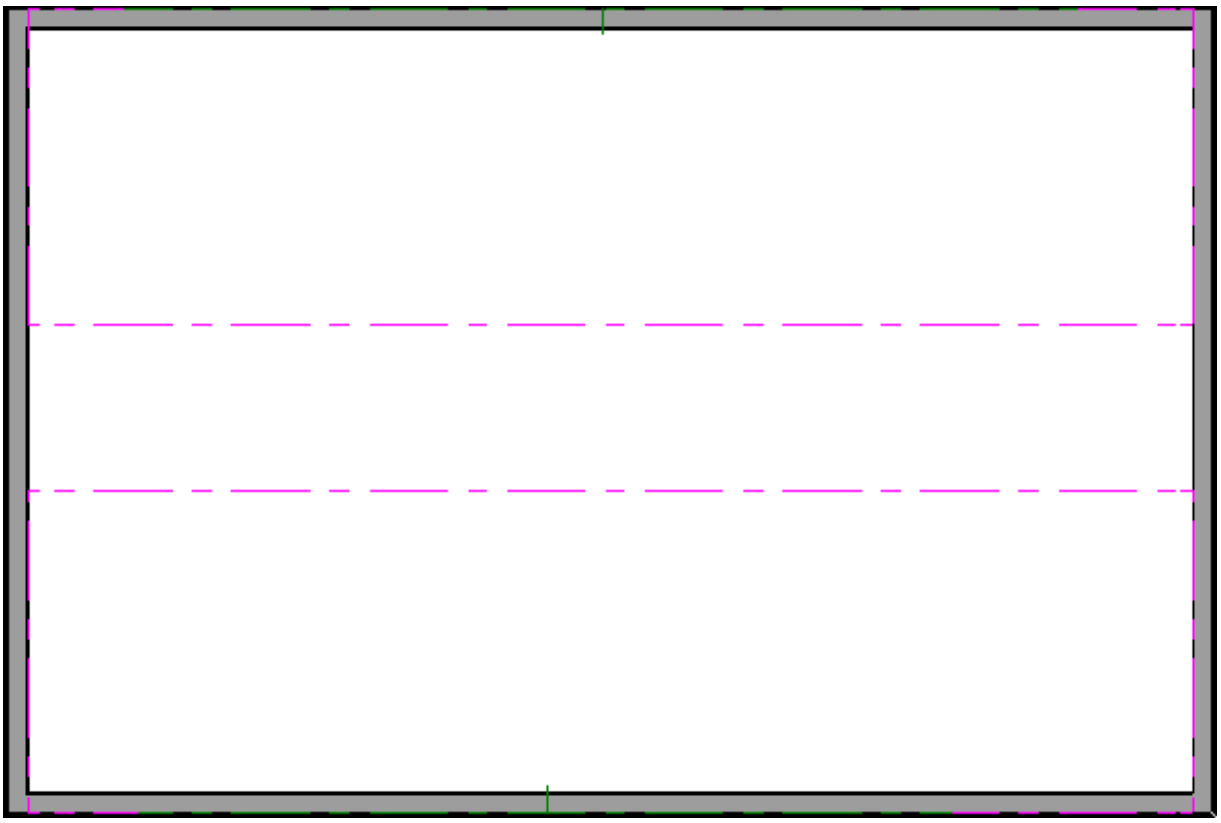
- Make sure that the **Height Inside Wall** is locked.
- Specify the desired **Pitch** for your vaulted ceiling.

In this example, 6" in 12 is used.

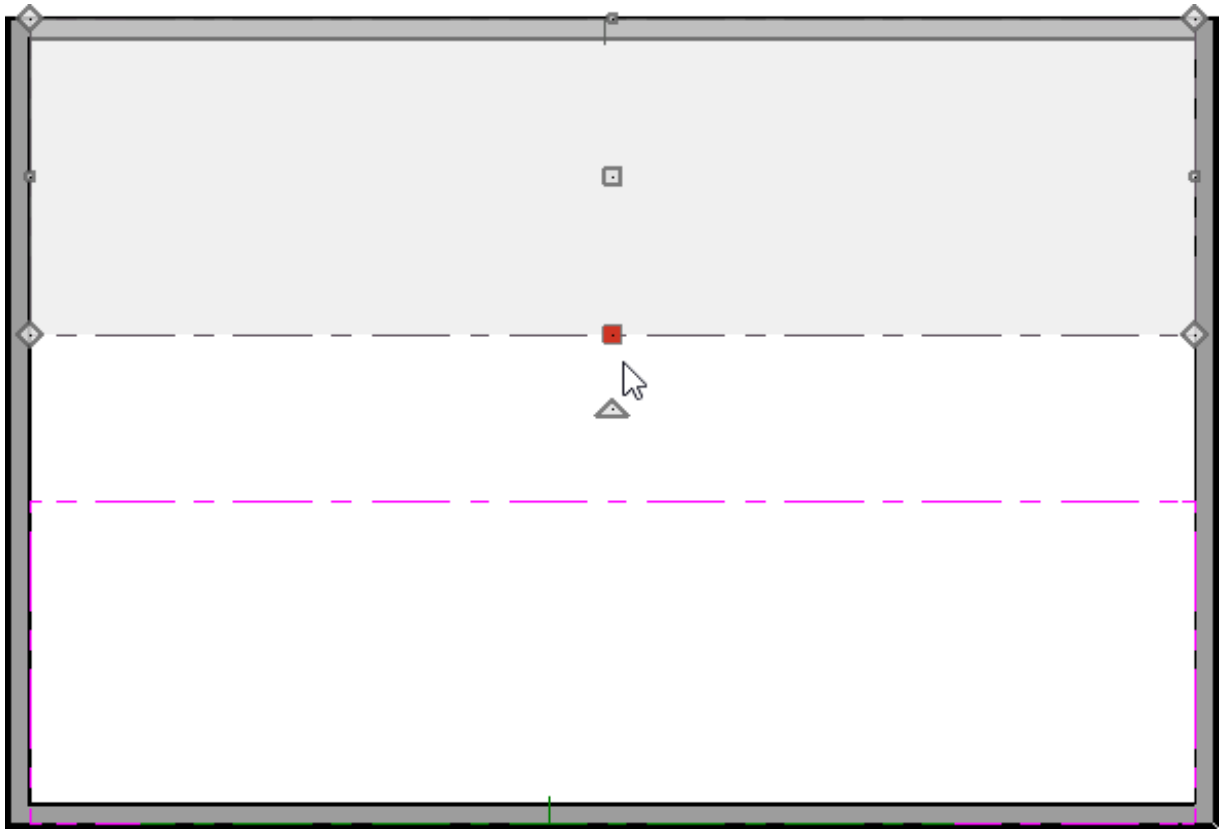
- Now lock the **Pitch** and set the **Height Outside Wall** value to match the Top of Plate value.

- Click **OK** to close the dialog and apply the change.

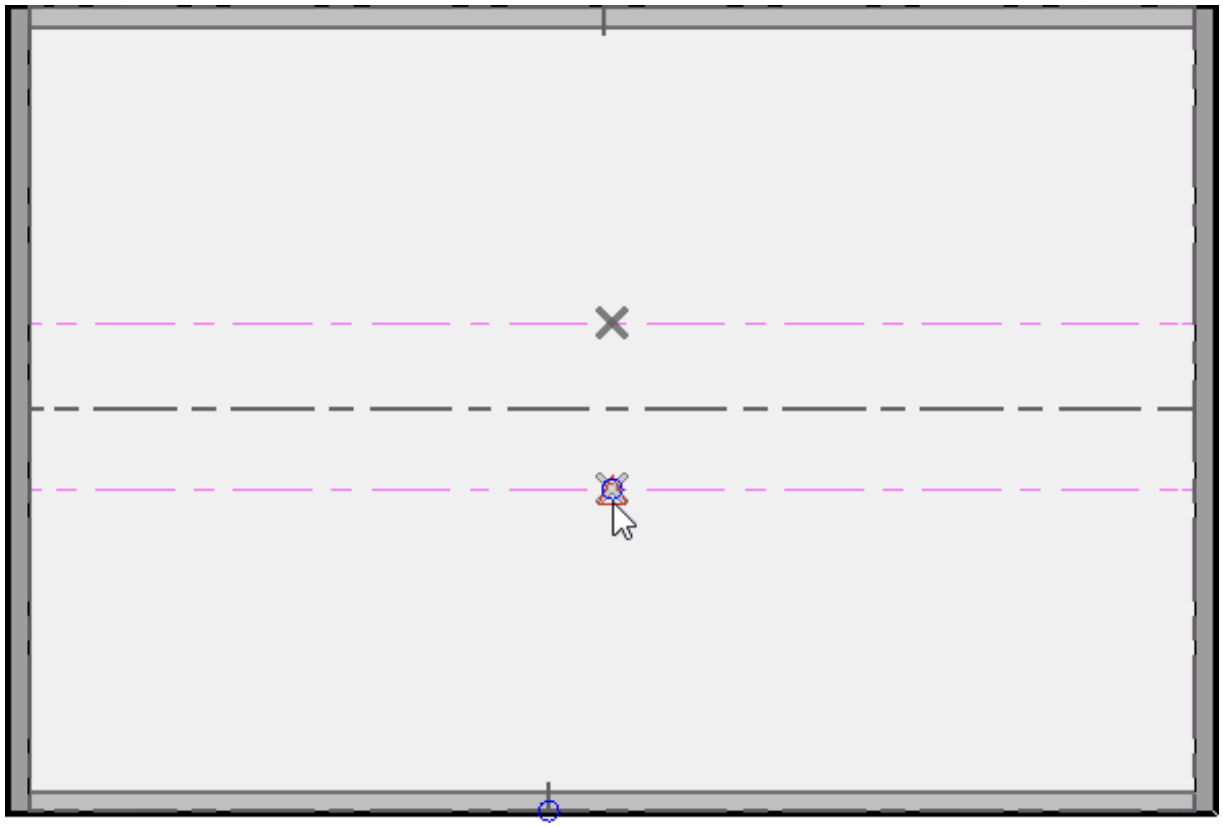
7. Repeat steps 4 through 6 to create a second ceiling plane opposite the first one.



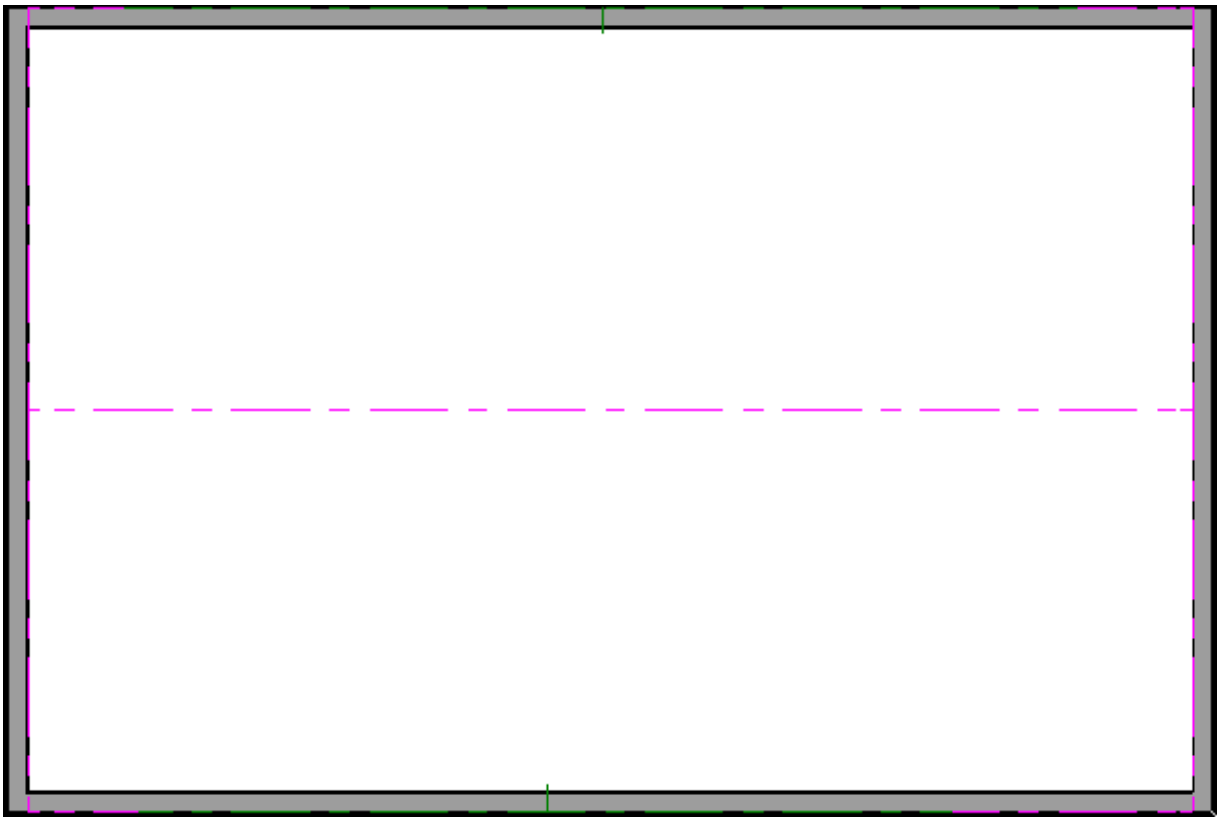
8. Click on the ridge edge of one of the ceiling planes,



9. Click the **Join Roof Planes** edit button then click the ridge edge of the other ceiling plane.



10. The two ceiling planes will join along the selected edges.



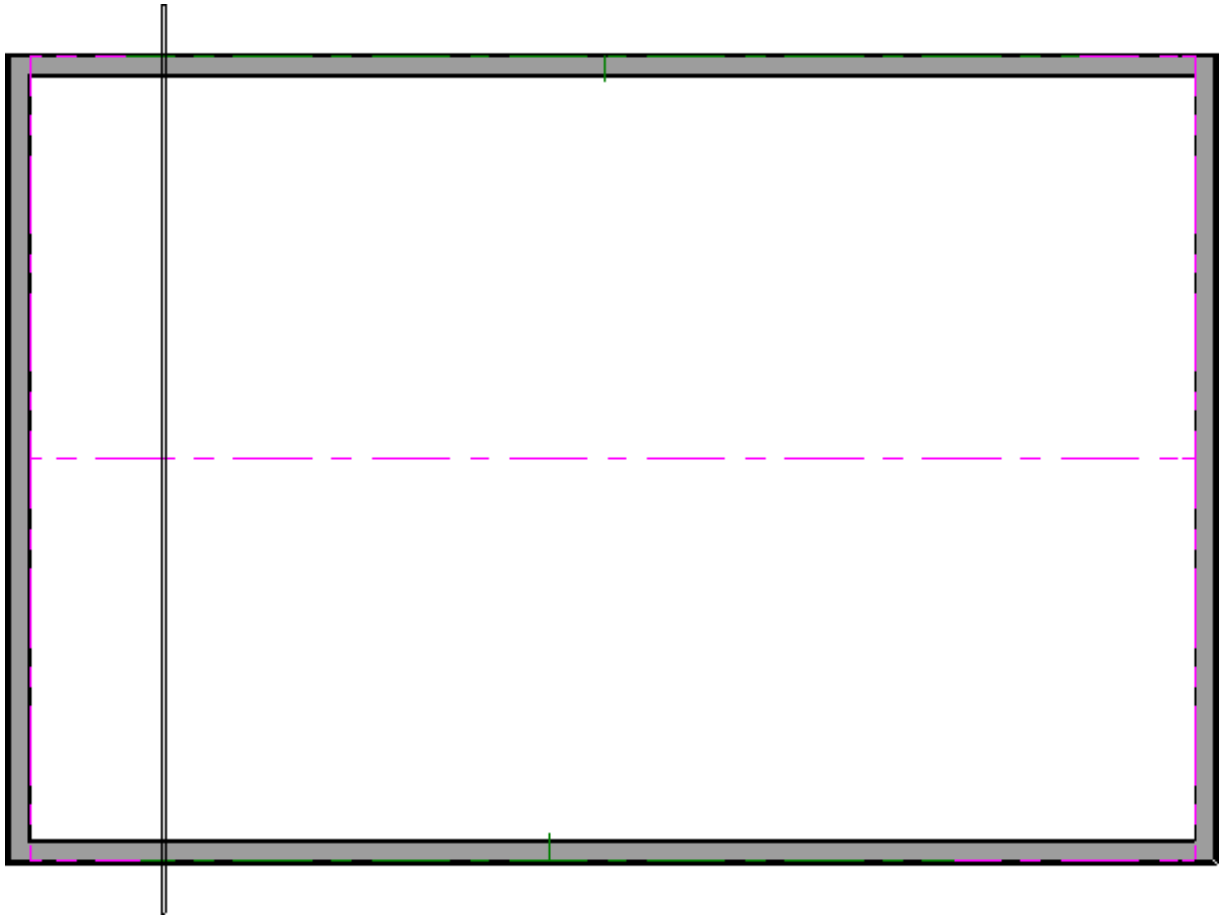
If you wish, you can turn the display of roof planes back on in the Layer Display Options dialog.

To create scissor trusses

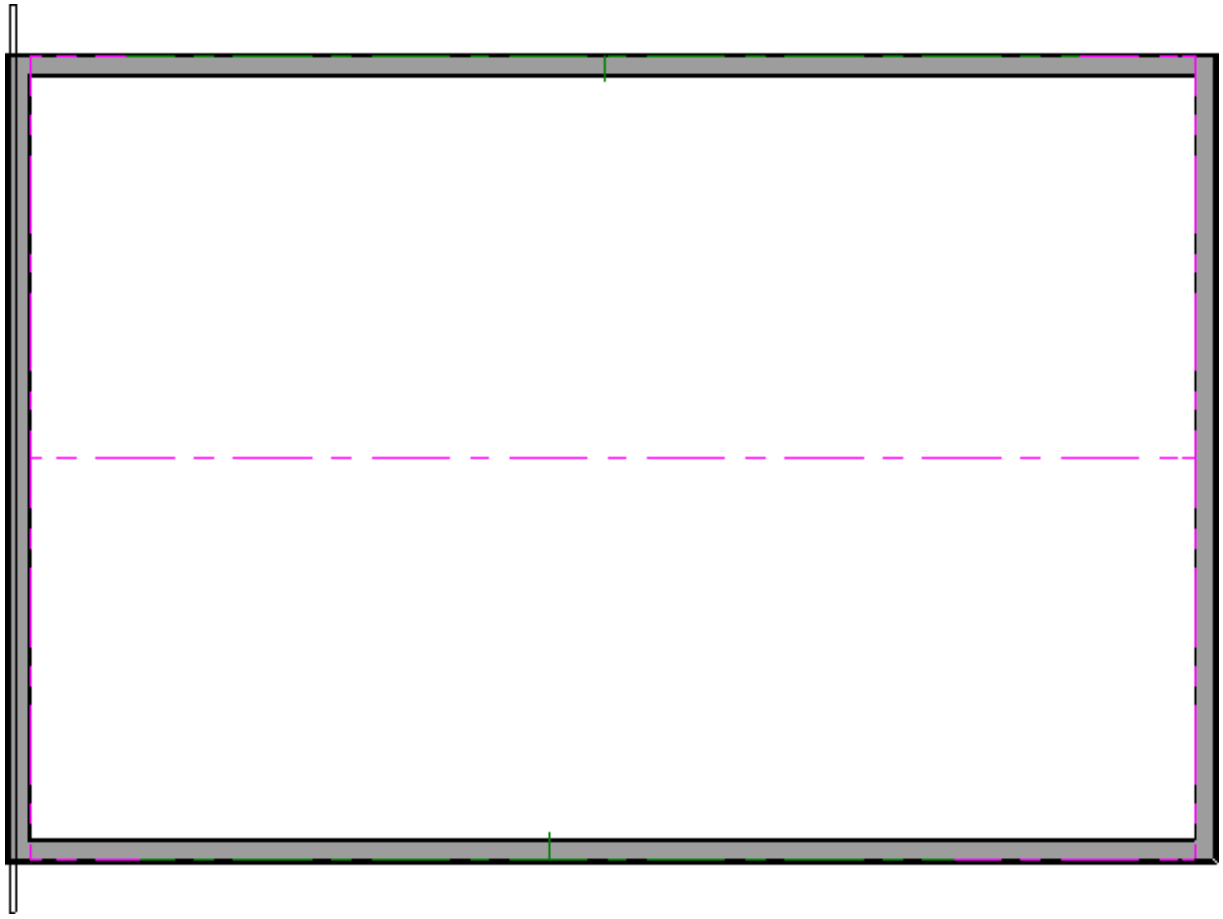
With both the ceiling and roof planes in place, you can now create roof trusses.

1. Select **Build> Framing> Roof Truss** from the menu.

2. Click and drag to draw a roof truss perpendicular to the ridge line of the roof and ceiling planes.



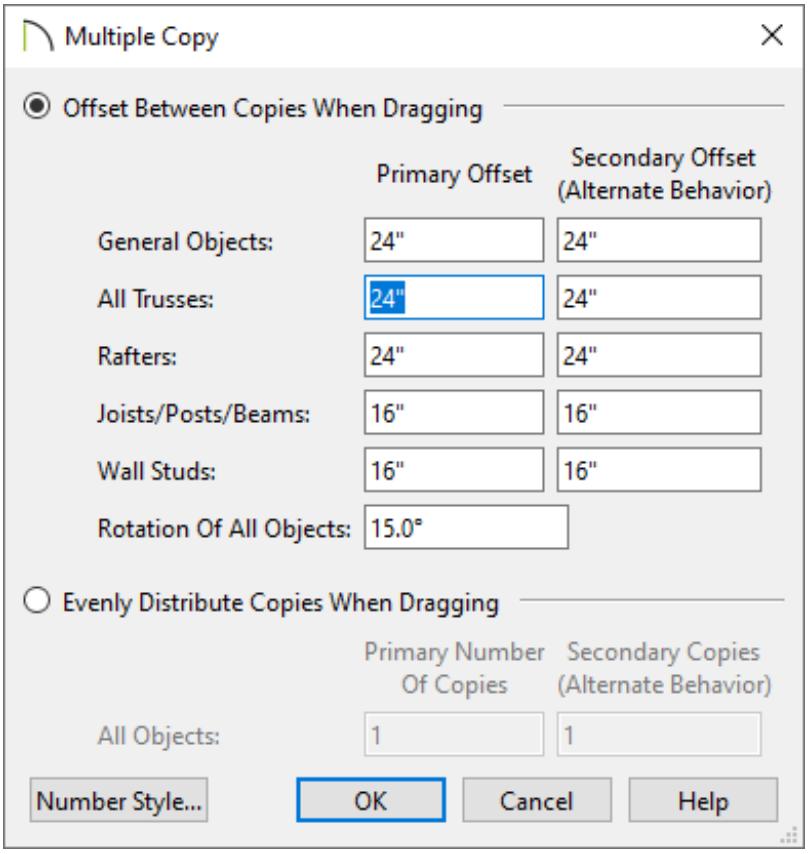
3. Click on the truss to select it and move it so that the exterior edge of the truss is aligned with the exterior edge of the framing layer of the wall.



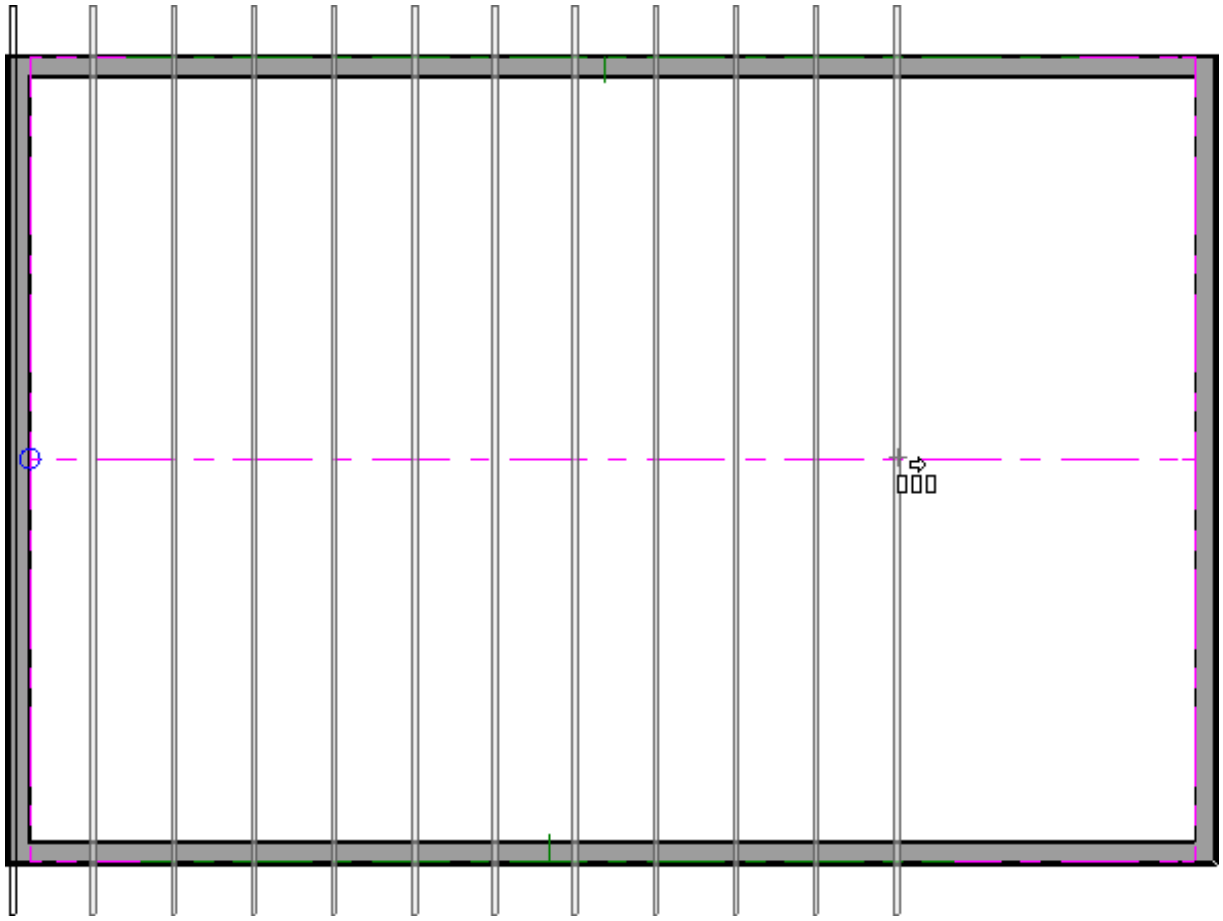
4. With the truss still selected, click the **Multiple Copy** edit button, then click the **Multiple Copy Interval** button to open the **Multiple Copy** dialog. Verify that **Offset Between Copies When Dragging** is selected and that the **Primary Offset** specified for **All Trusses** equals the desired O.C. truss spacing, then click **OK**.

   In this example, the default Primary Offset value of 24" is used.

   > **Note:** Multiple Copy is not available in Home Designer Pro. Instead, use the Transform/Replicate edit tool. As an example, if you wanted to create 6 copies all separated a certain distance from each other, you would check the Copy box, set the Number of Copies to 6, then check the option for Move and set the X Delta to be 24". Negative values can also be set for each of the deltas if needed.

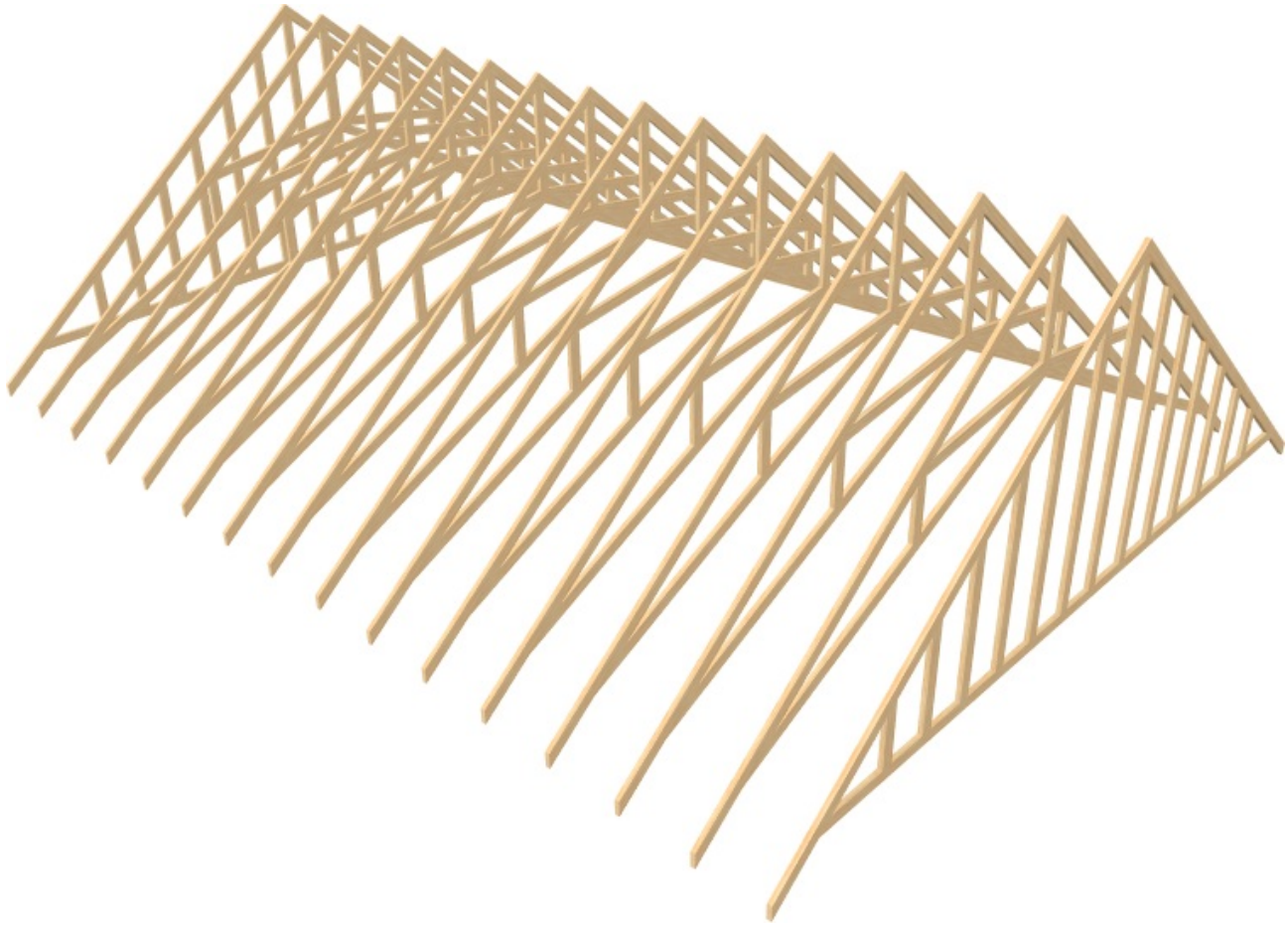


5. Hover over the main Move edit handle on the truss until you see the **Multiple Copy** cursor display, then click and drag across the structure to create copies 24" apart.



The trusses located on each end of the structure will be a full size trusses. If you wish to have end trusses instead, group select the trusses on each end, open them up to specification, check the "End Truss" and "Force Truss Rebuild" boxes, then click OK.

6. Create a **Framing Overview** to see the results.



Related Articles

- Creating an Attic Truss (/support/article/KB-00933/creating-an-attic-truss.html)
- Creating Exposed Trusses in a Cathedral Ceiling (/support/article/KB-00416/creating-exposed-trusses-in-a-cathedral-ceiling.html)
- Creating Roof Trusses (/support/article/KB-00981/creating-roof-trusses.html)

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