

Creating and Framing a Dropped Ceiling

Reference Number: **KB-01050**

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The information in this article applies to:



QUESTION


How do I create a dropped ceiling?

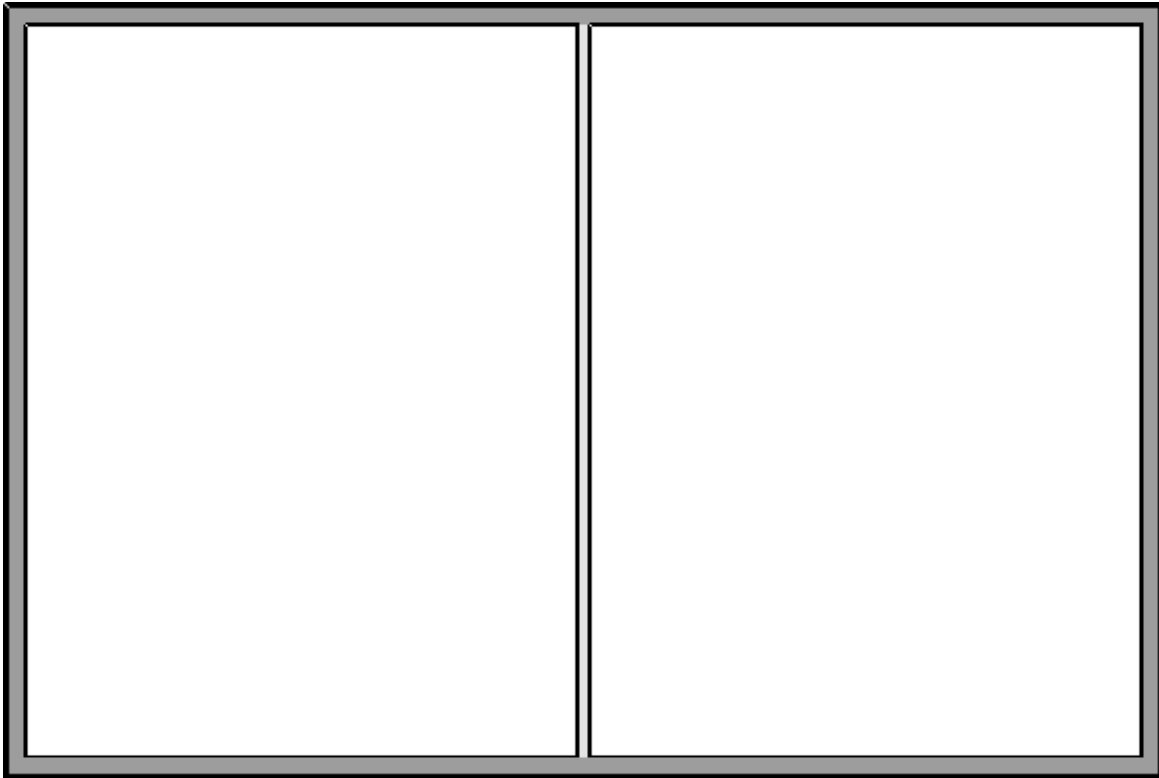
ANSWER


A dropped ceiling is a secondary ceiling, hung below the main, structural, ceiling. They may also be referred to as a drop ceiling, false ceiling, or suspended ceiling.

If you're wanting to design a suspended ceiling consisting of tiles, please refer to [Video # 311: Creating a Suspended or Dropped Ceiling](https://www.chiefarchitect.com/videos/watch/311/creating-a-suspended-or-dropped-ceiling.html?playlist=96) (<https://www.chiefarchitect.com/videos/watch/311/creating-a-suspended-or-dropped-ceiling.html?playlist=96>).

To create a dropped ceiling


1. **Open**  the plan file in which you need to create a dropped ceiling.

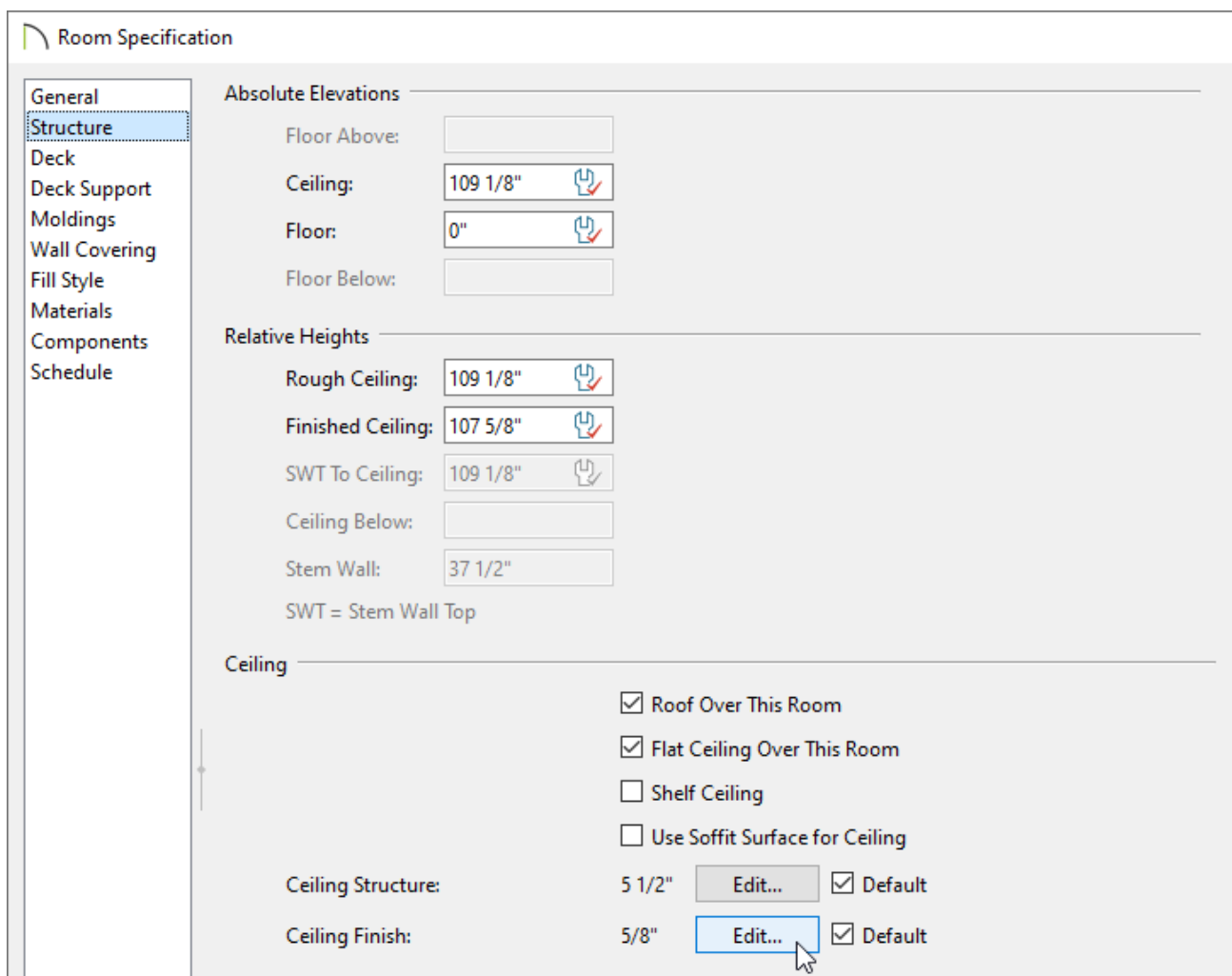


2. Using the **Select Objects**  tool, click in an empty space inside of the room that you want to assign a dropped ceiling to.








If you select an object located inside of a room, click the Select Next Object edit button ,or press the Tab key on your keyboard, until the room becomes selected.

3. With the room selected, click the **Open Object**  edit button.
4. On the **STRUCTURE** panel of the **Room Specification** dialog, click the **Edit** button next to Ceiling Finish.

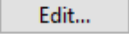
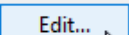


The image shows the 'Room Specification' dialog box with the 'Structure' panel selected in the left sidebar. The 'Absolute Elevations' section includes fields for 'Floor Above', 'Ceiling' (109 1/8"), 'Floor' (0"), and 'Floor Below'. The 'Relative Heights' section includes fields for 'Rough Ceiling' (109 1/8"), 'Finished Ceiling' (107 5/8"), 'SWT To Ceiling' (109 1/8"), 'Ceiling Below', and 'Stem Wall' (37 1/2"). The 'Ceiling' section has checkboxes for 'Roof Over This Room', 'Flat Ceiling Over This Room', 'Shelf Ceiling', and 'Use Soffit Surface for Ceiling'. Below these are 'Ceiling Structure' (5 1/2") and 'Ceiling Finish' (5/8"), each with an 'Edit...' button and a 'Default' checkbox. A mouse cursor is pointing at the 'Edit...' button for 'Ceiling Finish'.

Absolute Elevations	
Floor Above:	
Ceiling:	109 1/8" 
Floor:	0" 
Floor Below:	

Relative Heights	
Rough Ceiling:	109 1/8" 
Finished Ceiling:	107 5/8" 
SWT To Ceiling:	109 1/8" 
Ceiling Below:	
Stem Wall:	37 1/2"

SWT = Stem Wall Top

Ceiling	
<input checked="" type="checkbox"/>	Roof Over This Room
<input checked="" type="checkbox"/>	Flat Ceiling Over This Room
<input type="checkbox"/>	Shelf Ceiling
<input type="checkbox"/>	Use Soffit Surface for Ceiling
Ceiling Structure:	5 1/2"  <input checked="" type="checkbox"/> Default
Ceiling Finish:	5/8"  <input checked="" type="checkbox"/> Default

5. In the **Ceiling Finish Definition** dialog that opens next, select the topmost layer, which is Layer # 1, then click the **Insert Above** button to add a new layer.

Ceiling Finish Definition

Material Layers

Layer #	Material	Pattern	Texture	Fill	Thickness
1	Drywall		No Texture		5/8"
2	Color - White		No Texture		0"

Total Thickness: 5/8"

Structure

☐ Framing

Type: Lumber

Spacing: 96" On Center

Width: 1/2"

☐ Auto Detail as Insulation

☐ Air Gap

Number Style...

OK Cancel Help

- Specify the desired **Thickness** of this new layer, which will form the dropped ceiling framing.

In this example, 3 1/2" is used.

- Click within the **Material** column for the new layer to open the **Select Material** dialog, and choose your desired framing material.

In this example, the "Fir Framing 1" material is used.

- Under the Structure section, check the **Framing** box for this layer, then specify the **Type**, **Spacing**, and **Width**, as necessary.

In this example, Lumber is set for the Type, 16" is set for the Spacing, and 1 1/2" is set for the Width.

Ceiling Finish Definition

Material Layers

Layer #	Material	Pattern	Texture	Fill	Thickness
1	Fir Framing 1				3 1/2"
2	Drywall		No Texture		5/8"
3	Color - White		No Texture		0"

Insert Above
 Insert Below
 Move Up
 Move Down
 Delete

Total Thickness: 4 1/8"

Structure

☒ Framing

Type: Lumber

Spacing: 16" On Center

Width: 1 1/2"

☐ Auto Detail as Insulation

☐ Air Gap

Number Style...

OK Cancel Help

- Repeat this process if you require additional layers, such as an air gap, above the framing.

In this example, an additional layer was added with a Thickness of 7 7/8" and the material set to "Insulation Air Gap". When adding layers, it's important to check that the properties under the Structure section are set correctly. With this new layer, we made sure that the Framing box was unchecked and checked the Air Gap box instead.

Ceiling Finish Definition

Material Layers

Layer #	Material	Pattern	Texture	Fill	Thickness
1	Insulation Air Gap		No Texture		7 7/8"
2	Fir Framing 1				3 1/2"
3	Drywall		No Texture		5/8"
4	Color - White		No Texture		0"

Total Thickness: 12"

Structure

☐ Framing

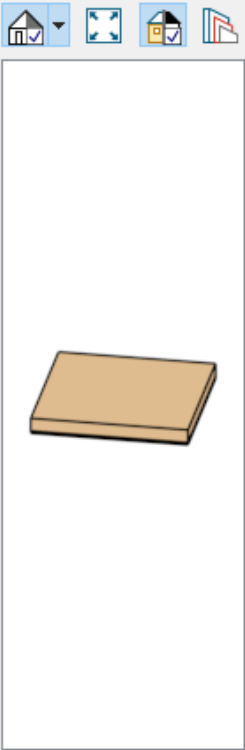
Type: Lumber

Spacing: 16" On Center

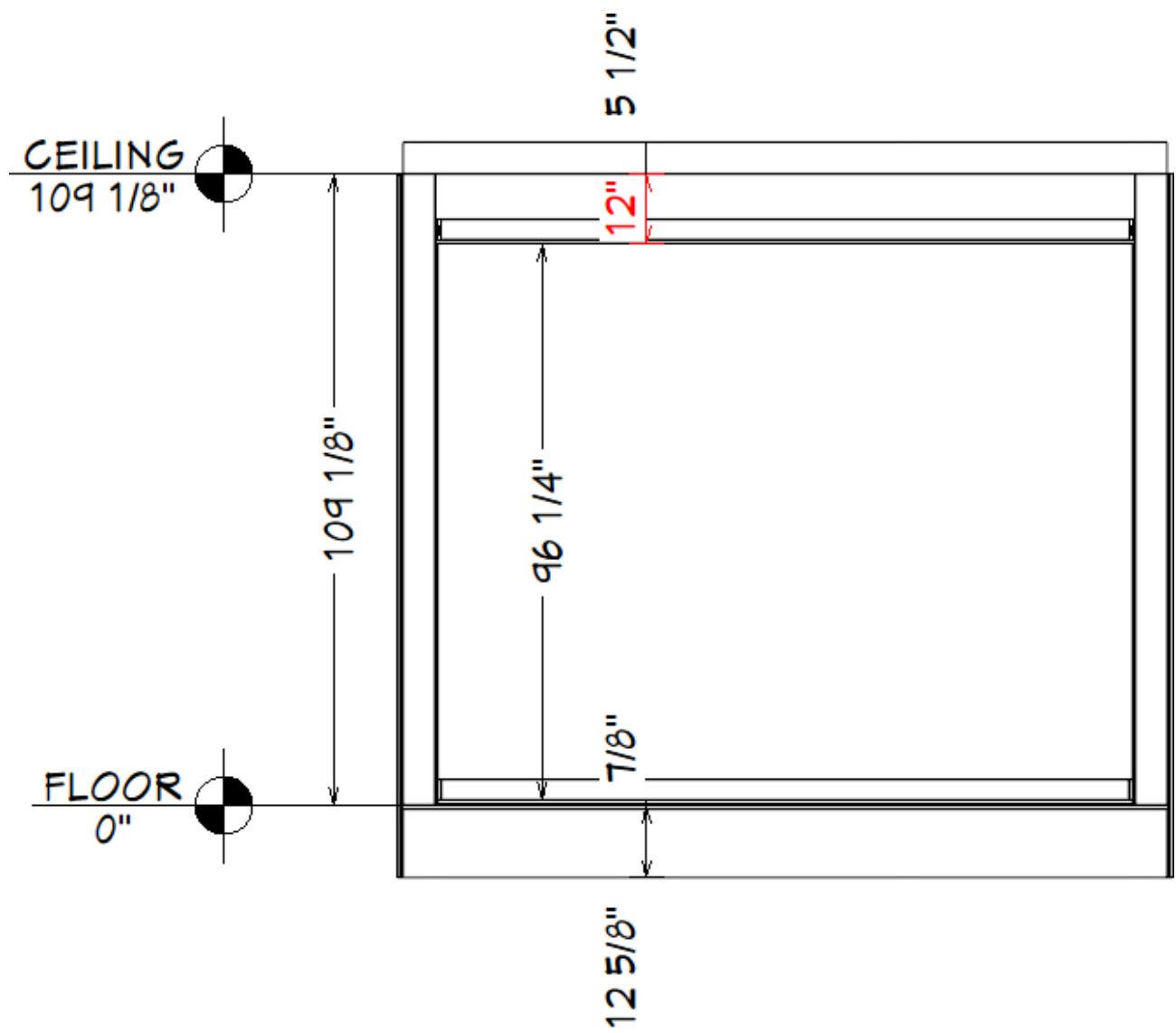
Width: 1 1/2"

☐ Auto Detail as Insulation

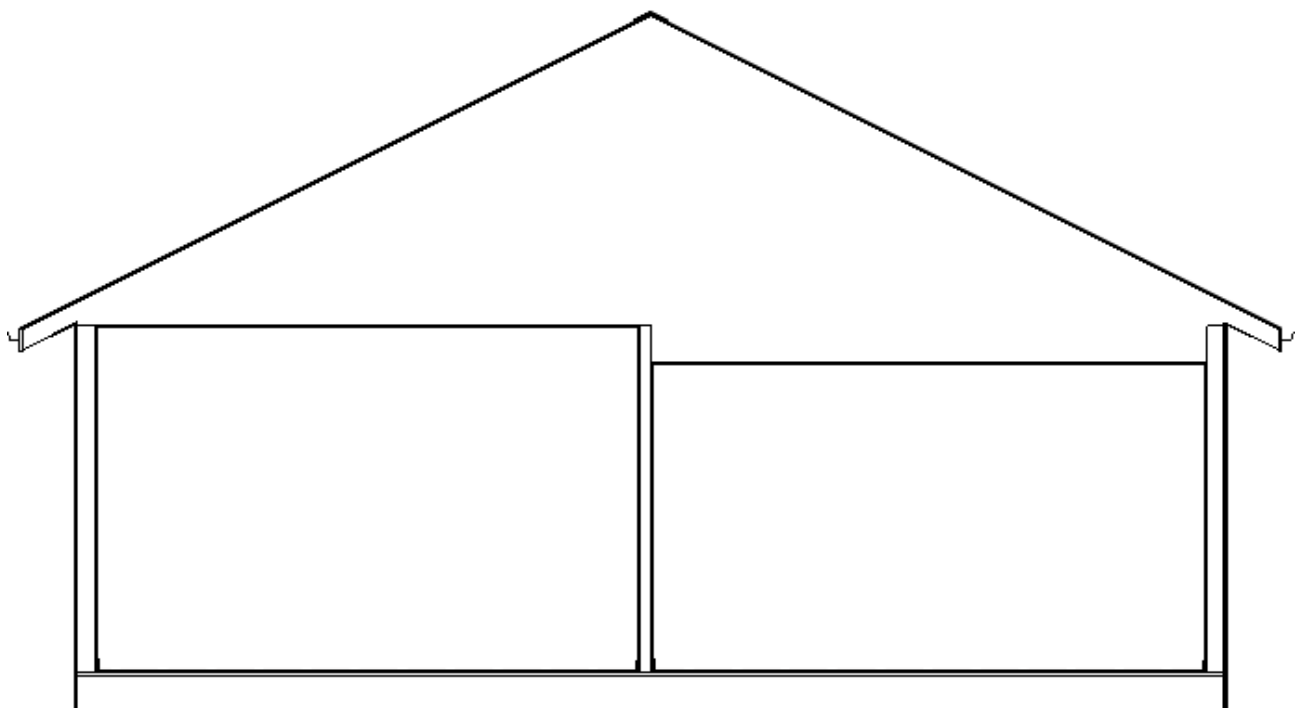
☒ Air Gap



- When you are finished, click **OK** to return to the **Room Specification** dialog and notice the ceiling preview on the right. Click **OK** again to confirm the change and close the dialog.




These results can also be seen in a **Backclipped Cross Section**  view.



If part or all of the platform above the dropped ceiling is a ceiling platform, a dropped ceiling's framing can be created automatically when ceiling framing is generated.

If, however, the entire platform above the dropped ceiling is a floor platform, the framing may need to be drawn manually.



To manually frame a dropped ceiling

1. Select the room with the lowered ceiling and click the **Open Object**  edit button.
2. On the **STRUCTURE** panel of the **Room Specification** dialog:




Room Specification

General
Structure
Deck
Deck Support
Moldings
Wall Covering
Fill Style
Materials
Components
Schedule

Absolute Elevations

Floor Above:
Ceiling: 
Floor: 
Floor Below:

Relative Heights

Rough Ceiling: 
Finished Ceiling: 
SWT To Ceiling: 
Ceiling Below:
Stem Wall:
SWT = Stem Wall Top

Ceiling

☒ Roof Over This Room
☒ Flat Ceiling Over This Room
☐ Shelf Ceiling
☐ Use Soffit Surface for Ceiling

Ceiling Structure: ☒ Default
Ceiling Finish: ☐ Default

- Take note of the Ceiling height under the Absolute Elevations section.

In this example, this value is 109 1/8".

- Click the **Edit** button next to Ceiling Finish and take note of the Thickness of the

layer(s) located above the framing layer.

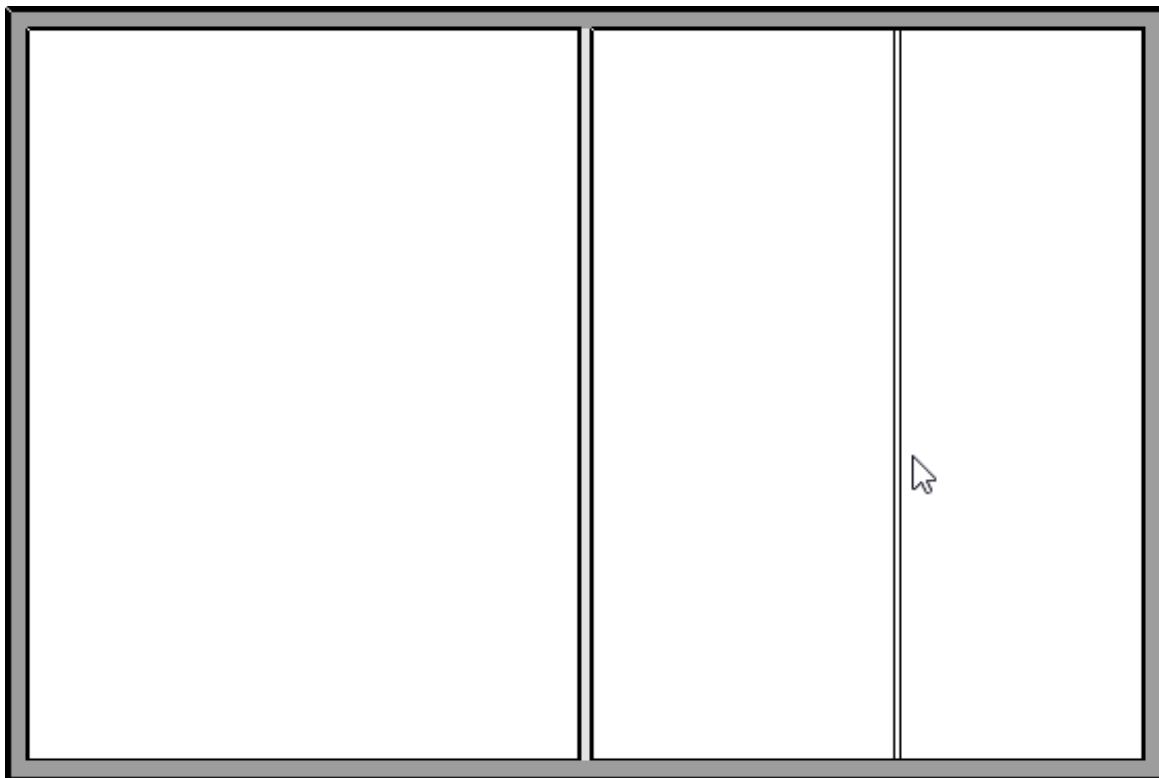
In this example, the layer(s) above the framing equal a value of $7 \frac{7}{8}$ ".

- Click **Cancel** to close both dialog boxes.

3. Subtract the thickness of the ceiling finish layers above the framing layer from the ceiling height. The resulting value is the top height of your lowered ceiling framing members.

In this example, we subtracted $7 \frac{7}{8}$ " from $109 \frac{1}{8}$ ", giving us a value of $101 \frac{1}{4}$ ".

4. Select **Build> Framing> General Framing**  from the menu, then click and drag to draw a framing member across the room with the lowered ceiling.



5. Click on the joist to select it, then click the **Open Object**  edit button.

6. On the **GENERAL** panel of the **Framing Specification** dialog:

Framing Specification (Ceiling Joist)

General

Depth and Height

☐ Raise/Lower: 0" Apply

☐ Lock Top Height: 101 1/4"

☐ Lock Bottom Height: 97 3/4"

☒ Lock Depth: 3 1/2"

Options

Width: 1 1/2"

Role: Ceiling Joist

Type: Lumber

☐ Treated

Length and Angle

Length: 228"

Angle: 90.0°

Lock: ☐ Start ☒ Center ☐ End

- Specify the desired **Width, Role, and Type**.

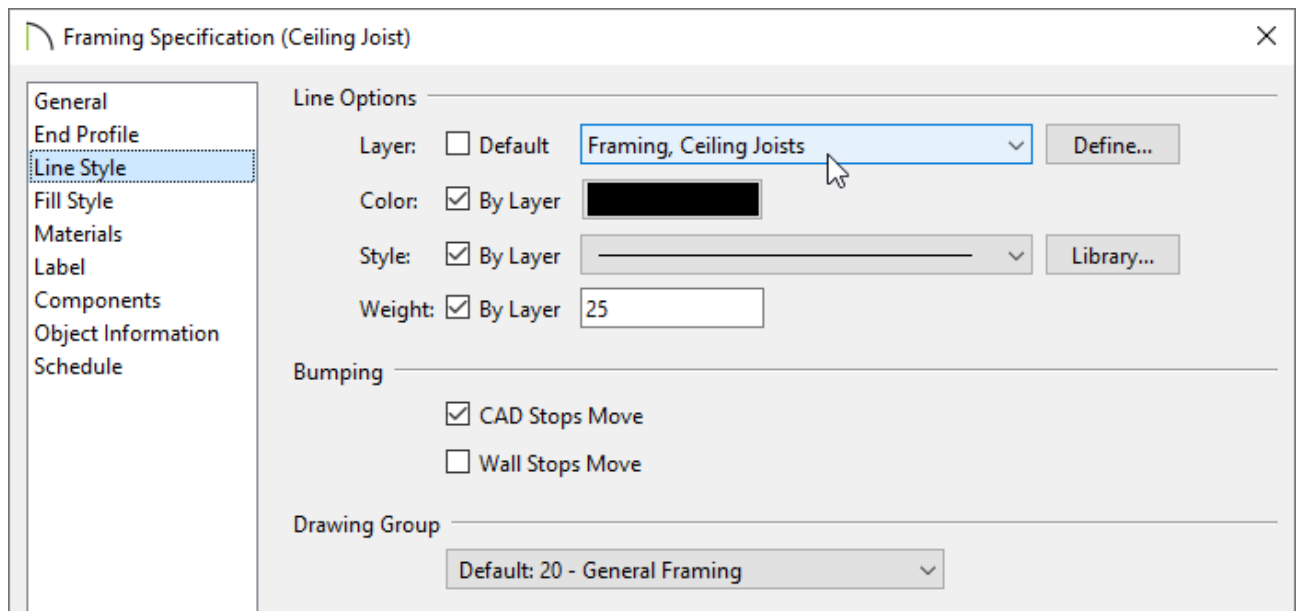
In this example, 1 1/2" thick Lumber is used.


- Specify the desired depth using the **Lock Depth** field, then click the radio button beside this field to lock this value.

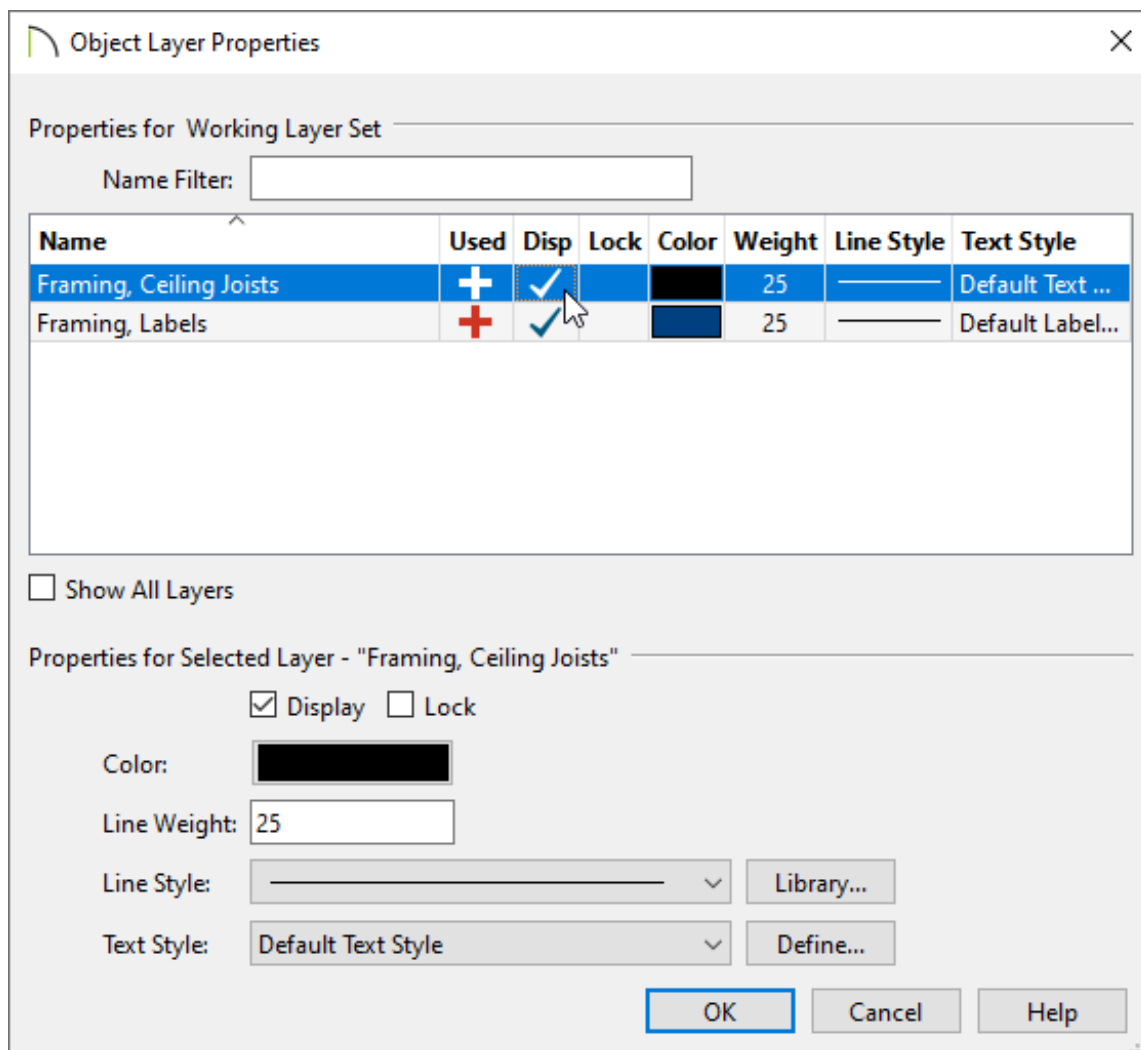
In this example, 3 1/2" is used.

- Specify the desired top height using the **Lock Top Height** field. Use the value you determined in Step 3, above, which is 101 1/4" in this example.
- Press the **Tab** key on your keyboard to update the dialog, then confirm that your changes are all correct.

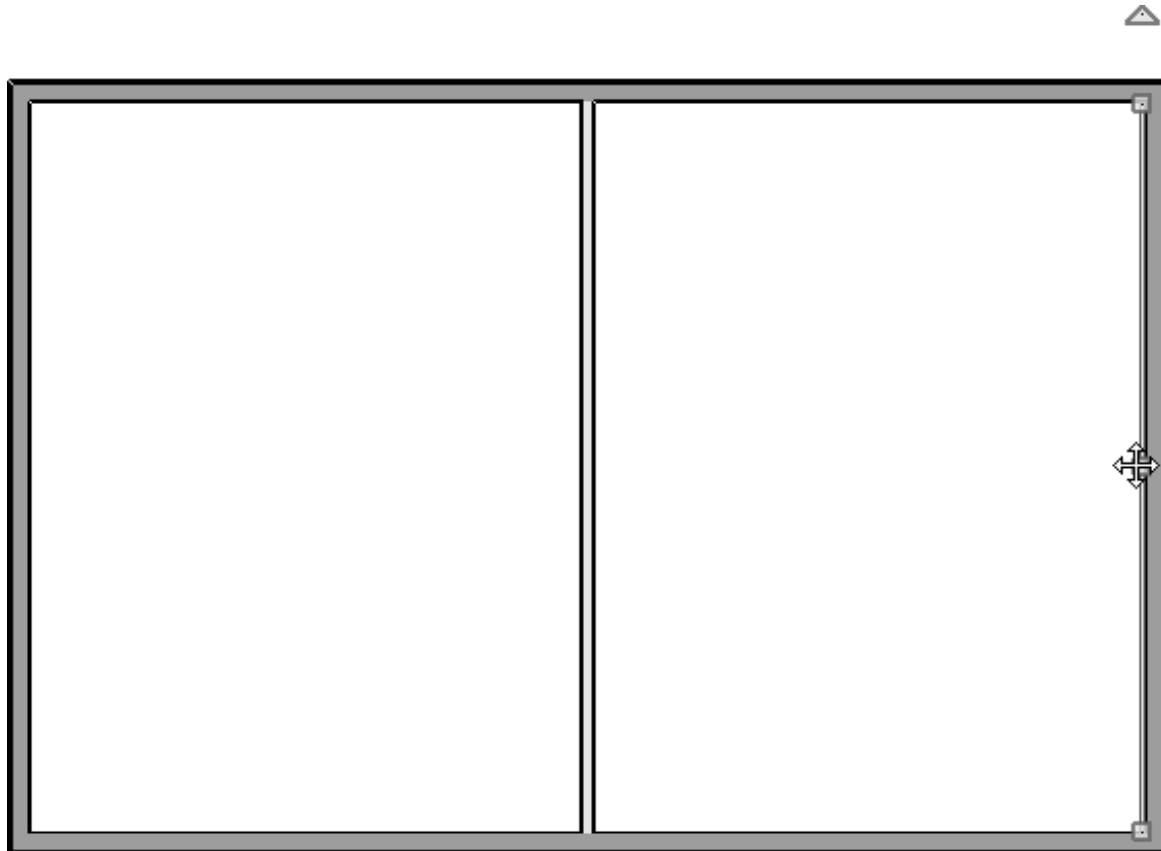
- On the **LINE STYLE** panel, use the Layer drop-down to select the "Framing, Ceiling Joists" layer from the list, then click **OK**.






8. With the framing member still selected, click the **Object Layer Properties**  edit button to open the **Object Layer Properties** dialog, place a check in the **Disp** column or **Display** checkbox for the "Framing, Ceiling Joists" layer, then click **OK**.

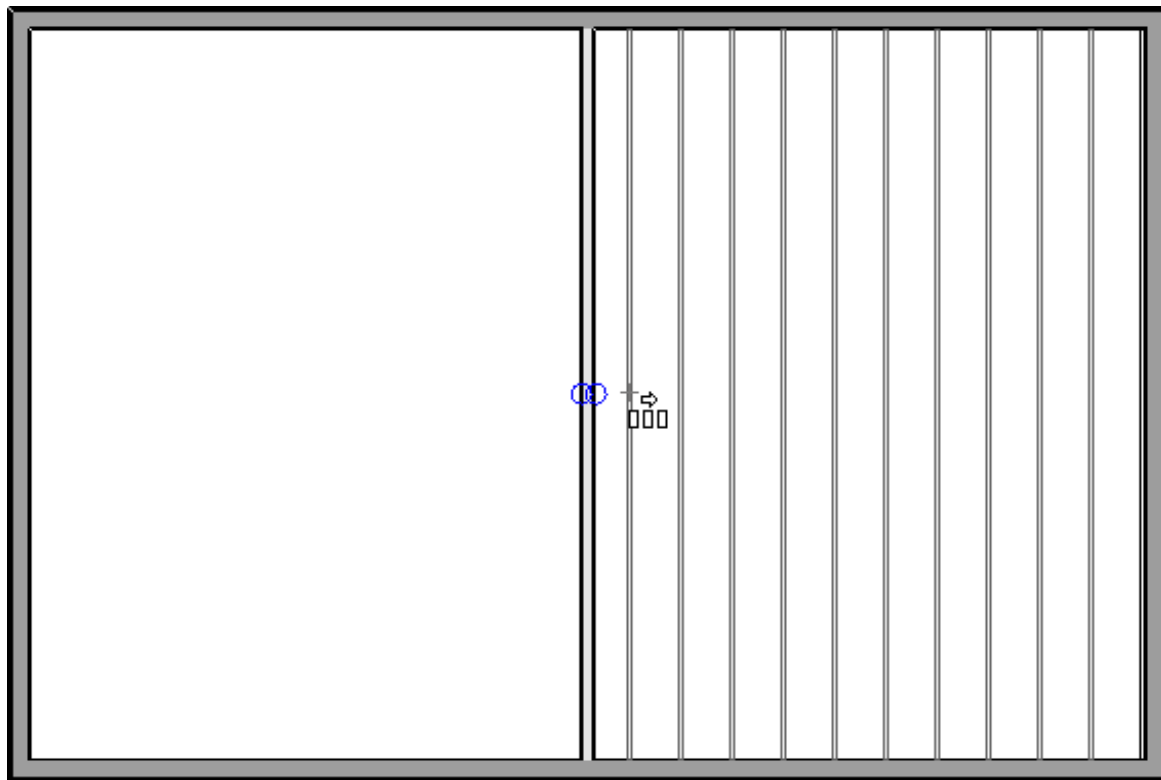


9. Move the framing member into position along the inside surface of a wall's Main Layer using whatever method you prefer. For example:




- Using its **Move**  edit handle,
 - Using a dimension,
 - Using the **Transform/Replicate Object**  edit tool.
10. Once the framing member is positioned against a wall, select it and click the **Multiple Copy**  edit button, then click-and-drag to produce copies at regular intervals.



Note: You can specify your desired Multiple Copy interval by clicking the Multiple Copy Interval edit button.

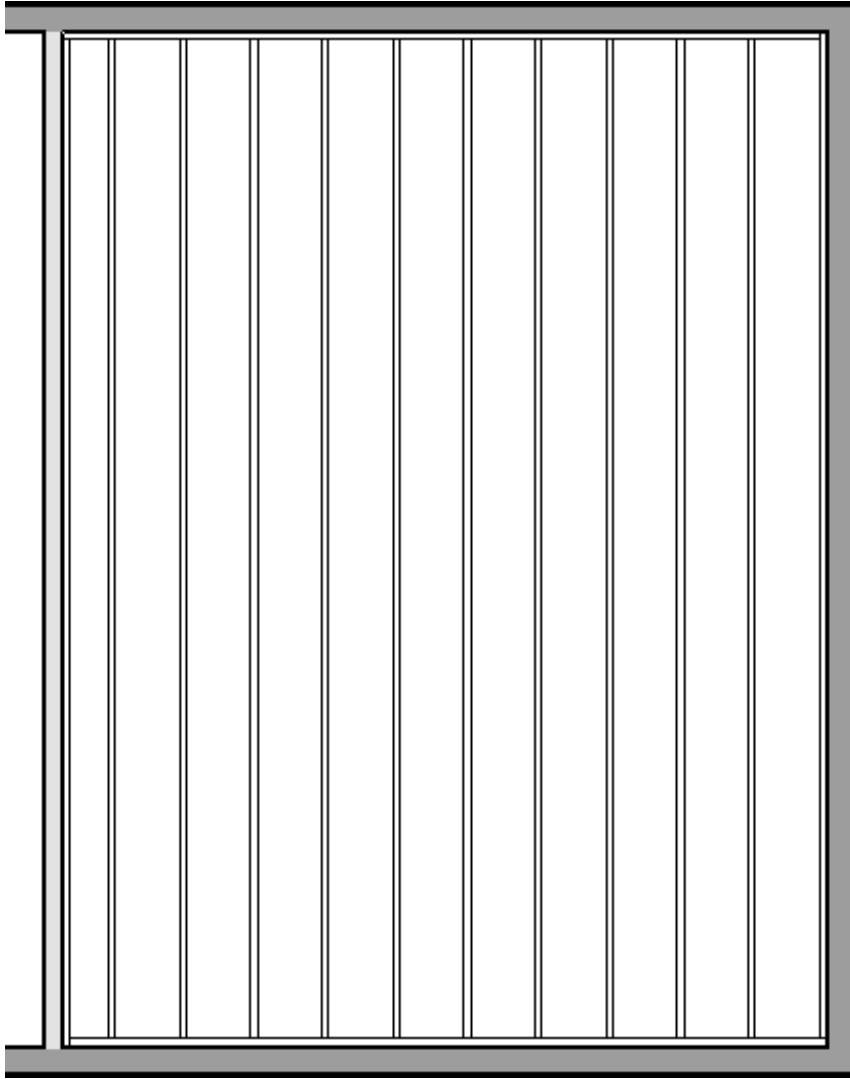



11. You can add ledger boards for the lowered ceiling joists using the same steps:

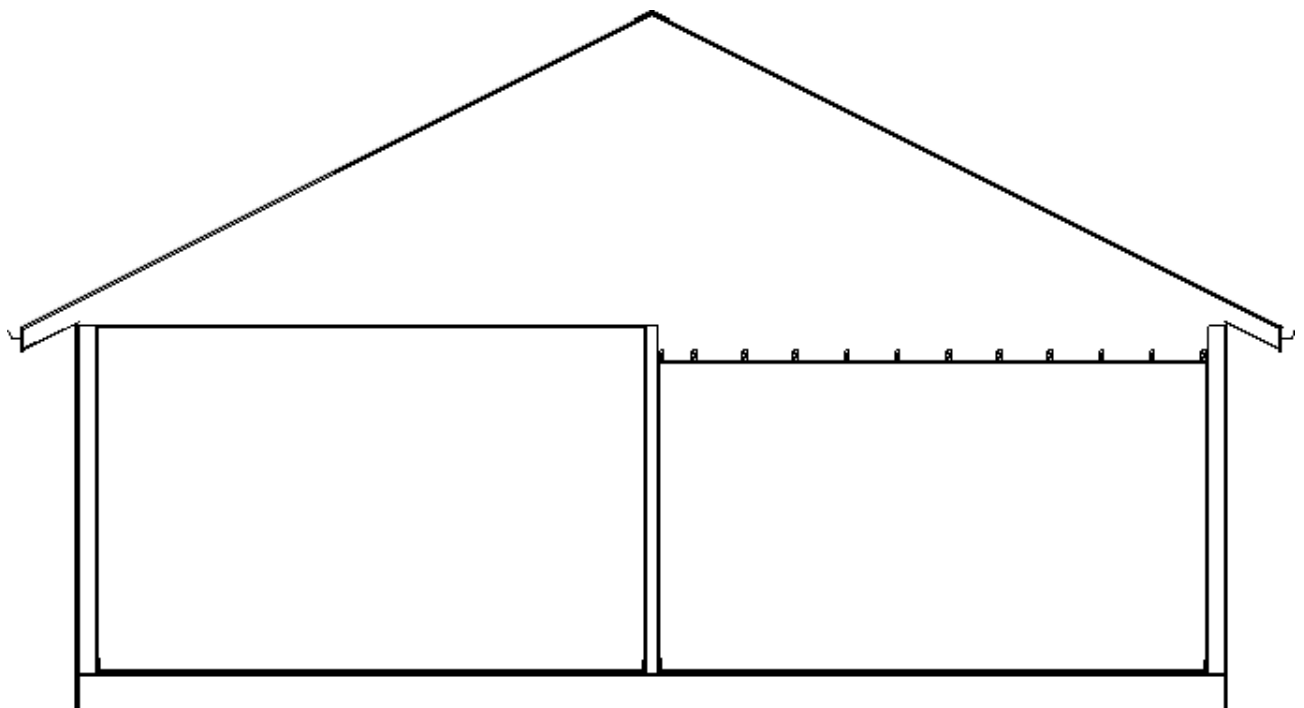
- Draw a **General Framing**  object;
- Edit its **Depth, Top Height**, and other attributes as needed;
- Move it into position against a wall.

12. To trim the dropped ceiling joists so that they butt against the ledger instead of extending into it, use the **Trim Objects**  edit tool:

- **Zoom**  in on the ledger so you can see it clearly.
- Click on the ledger to select it;
- Click the **Trim Objects**  edit tool;
- Click and drag to draw a temporary fence inside of the ledger and through the joists that you wish to trim.
- When you release the mouse button, all joists touched by the temporary fence will trim to the edge of the ledger.



13. You can now see the lowered ceiling framing in a **Backclipped Cross Section**  if you turn on the display of the "Framing, Ceiling Joists" layer.



📄 [Manually Drawing Framing Members \(/support/article/KB-00727/manually-drawing-framing-members.html\)](/support/article/KB-00727/manually-drawing-framing-members.html)

📄 [Troubleshooting Why Floor and Ceiling Framing Doesn't Generate \(/support/article/KB-00400/troubleshooting-why-floor-and-ceiling-framing-doesn-t-generate.html\)](/support/article/KB-00400/troubleshooting-why-floor-and-ceiling-framing-doesn-t-generate.html)



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