Chief Architect®

Architectural Home Design Software

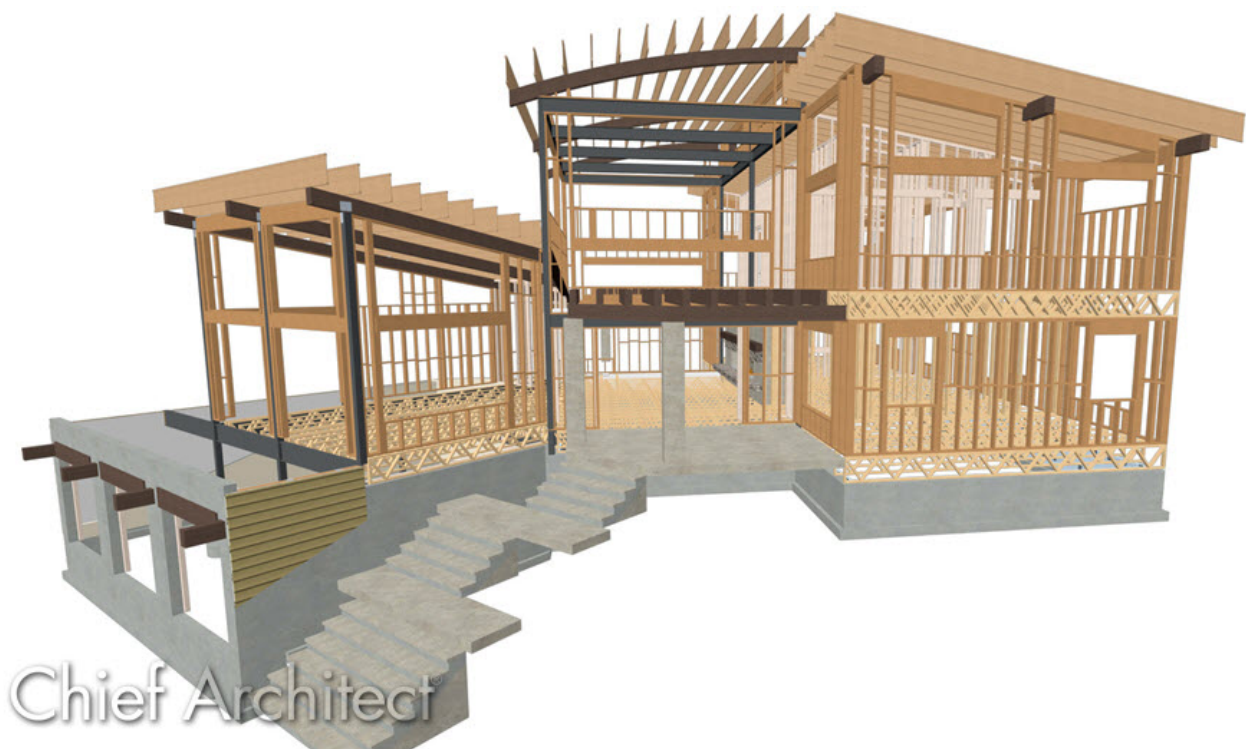# General Framing Guidelines

Reference Number: **KB-00465**

Last Modified: **April 10, 2024**

The information in this article applies to:

PREMIER

QUESTION

What is the best way to approach framing in Chief Architect?

ANSWER

In this tutorial, we will describe recommended framing practices in Chief Architect. Specifically, we will discuss:
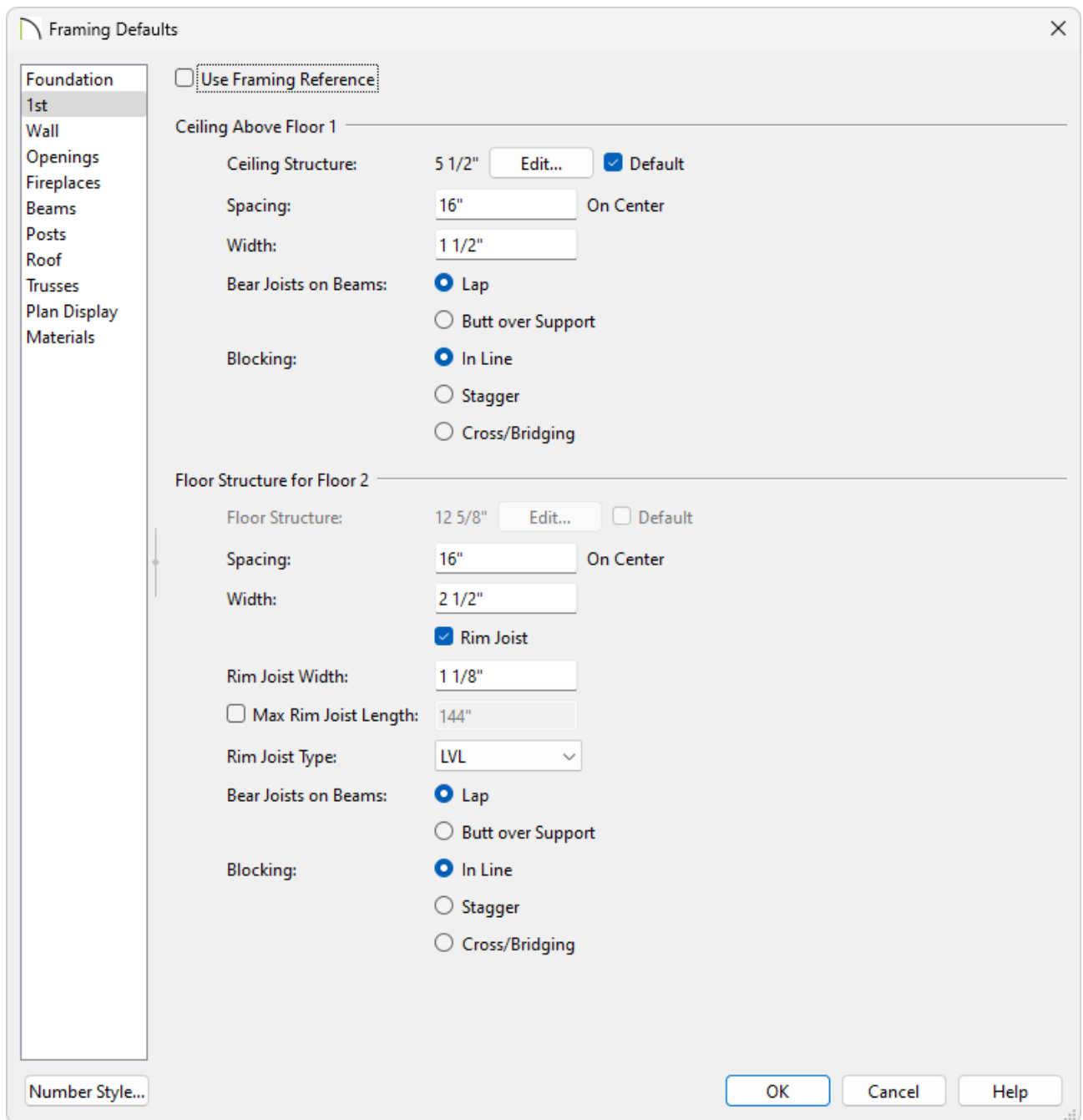
- Setting up Framing Defaults
- Generating Automatic Framing
- Manually building and editing framing
- Changing Framing Defaults in an existing plan

Before you begin drawing your plan, it's recommended that you set up your framing defaults to reflect the way you want the structure to be built. Changing these defaults after the structure is complete may cause problems, requiring you to re-do work and lower your productivity.

To setup framing defaults

1. Select **Edit> Default Settings** , highlight the **Framing** category, then click **Edit**.

2. In the **Framing Defaults** dialog, visit each panel and specify the spacing, framing member size, framing member type, and other information.

> **Note:** While all framing default settings are important to your structure, the floor framing will be the most time-consuming to change after your plan is complete.

Framing Defaults

Foundation
1st
Wall
Openings
Fireplaces
Beams
Posts
Roof
Trusses
Plan Display
Materials

☐ Use Framing Reference

Ceiling Above Floor 1

Ceiling Structure:	5 1/2" Edit...	☑ Default
Spacing:	16"	On Center
Width:	1 1/2"	

Bear Joists on Beams: ● Lap
                       ○ Butt over Support

Blocking: ● In Line
           ○ Stagger
           ○ Cross/Bridging

Floor Structure for Floor 2

Floor Structure:	12 5/8" Edit...	☐ Default
Spacing:	16"	On Center
Width:	2 1/2"	

☑ Rim Joist
Rim Joist Width: 1 1/8"
☐ Max Rim Joist Length: 144"
Rim Joist Type: LVL ⌄

Bear Joists on Beams: ● Lap
                       ○ Butt over Support

Blocking: ● In Line
           ○ Stagger
           ○ Cross/Bridging

Number Style...   OK   Cancel   Help

3. When you have setup your framing defaults to your satisfaction, click **OK**.

4. Framing layers associated with Wall Types can also be modified to your liking. Navigate to **Build> Wall> Define Wall Types** 📗, and in the **Wall Type Definitions** dialog that opens:

- Choose the Wall Type you'd like to modify using the drop-down menu located in the top left corner.

- Wall layers that are to be framed will typically be listed under the Main Layers category. Select the desired wall layer to make modifications, or select the **Insert Above** or **Insert Below** buttons to add a new wall layer above or below the selected layer.

- Specify your desired framing **Material** as well as an appropriate **Thickness** value for your framing layers.

- Check **Framing** to produce framing for the selected layer when wall framing is generated. Select the appropriate framing **Type** from the drop-down menu, the **Spacing**, as well as the **Width**.

  In X12 and prior versions, these properties are part of the framing material that is chosen for the wall layer.

- Set your **Top** and **Bottom Plate Count** and **Width**, as well as the **Max Plate Length**.

  These options are not available in X13 and prior versions.

- Check **Horizontal Framing** to produce framing that runs horizontally instead of vertically, sometimes referred to as girts. When Horizontal Framing is checked, specify the **Bottom Run Elevation**, which is measured from the center of the lowest horizontal framing member relative to zero, the default top height of the subflooring on Floor 1. Also, specify the **Max Girt Length**, which is available in X14 and newer versions.

  The ability to create Horizontal Framing did not exist in X12 and prior versions.

- Once the framing wall layers are setup to your liking for each of your Wall Types, click **OK**.

Note: Floor and ceiling heights, which determine wall heights, are set in the Floor Defaults dialog for each floor in your plan. Before drawing on each new floor, be sure to specify these values, as well.

When you are confident that your plan is in its final state, it's a good time to generate framing. You can build framing at any time, however, if changes are made to the plan, manual framing will not update to reflect the changes.

To generate automatic framing

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

   In X14 and newer versions, select **Build> Framing> Build All Framing** to build roof, wall, platform, and deck framing with a single click.

2. In the **Build Framing** dialog, click the **Framing Defaults** button to open your **Framing Defaults** and visit each panel to verify that the default information is correct. Once you have verified that the information is correct, click **OK**.
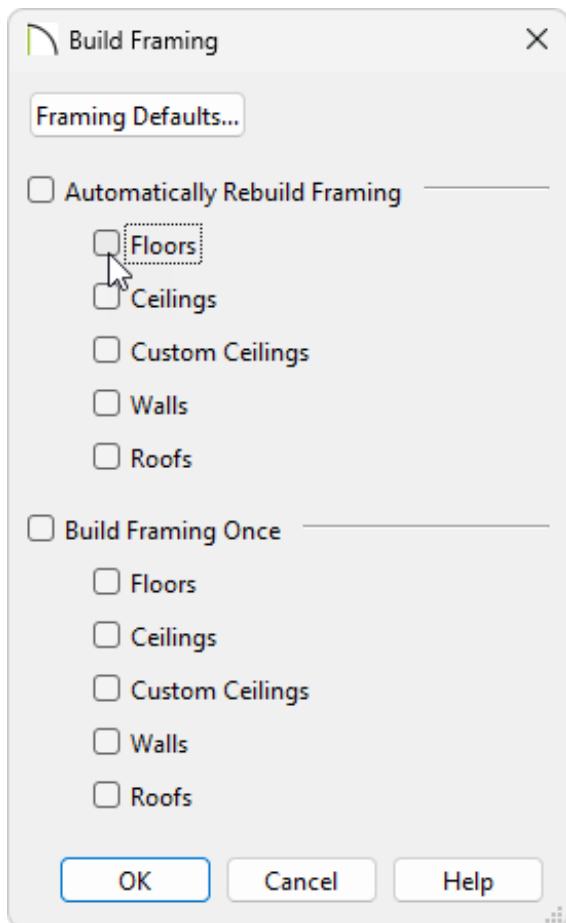
In X15 and prior versions, only a single **Build Framing** dialog existed in which framing settings along with **Build Framing** boxes existed. Visit each panel of this dialog and verify that the information is correct.

Some important framing information to be aware:

- Floor framing for a particular floor in your plan is accessed on the floor below. Floor 1 floor framing, for example, is built on Floor 0 (foundation level), with their settings located on the Foundation panel.

- In order to create the floor framing for Floor 1, a Floor 0 must be present. If a Floor 0 has not been built, the Build Floor Framing checkbox on the Foundation panel will not be available.

- Ceiling framing for a particular floor in your plan is accessed on that floor.

- Starting in X14, the ability to create **Roof Overframing** is available under the Roof panel.

> **Note:** In X14 and prior, although properties relating to trusses can be specified on the Trusses dialog panel, trusses cannot be built automatically. Navigate to Build> Framing> Roof Truss or Floor/Ceiling Truss, then click and drag in your plan to draw out trusses.

3. In the **Build Framing** dialog, check the appropriate **Build** box for each type of framing that you would like to generate, then click **OK**.

Build Framing

Framing Defaults...

☐ Automatically Rebuild Framing
   ☐ Floors
   ☐ Ceilings
   ☐ Custom Ceilings
   ☐ Walls
   ☐ Roofs

☐ Build Framing Once
   ☐ Floors
   ☐ Ceilings
   ☐ Custom Ceilings
   ☐ Walls
   ☐ Roofs

   OK   Cancel   Help

It's common to use a combination of both automatic and manual framing in a single Chief Architect plan.

To build or edit framing manually

With the exception of posts, framing objects are drawn by clicking and dragging in a straight line, similar to other line-based objects. The manual framing tools, which can be accessed by navigating to Build> Framing from the menu, are organized into categories: general framing, roof framing, and floor/ceiling framing. The category that a drawing tool belongs to determines where it can be used:

- Roof framing objects can only be drawn within the area of one or more roof planes.

- Floor and ceiling framing objects can only be drawn within one or more floor or ceiling platforms.

- **General Framing** objects and **Posts** can be drawn anywhere in a model.

- **General Framing** objects can also be drawn in CAD Details.

- **Wall Bridging** can only be drawn in a Wall Detail.

Manually drawn floor, ceiling, and roof framing is unaffected when automatic framing is rebuilt and remains along with the newly produced automatic framing. In contrast, manually drawn wall framing is deleted when automatic framing is rebuilt. You can, however, prevent this from happening by checking the Retain Wall Framing option located in the Wall Specification dialog.

1. Once framing is automatically generated or manually created, it can be edited further.

2. Use Wall Detail views to edit wall framing components. Wall Details can be accessed from the Project Browser or by right-clicking on a wall and selecting the **Open Wall Detail** edit button.

   If you do not see the Project Browser, select **View> Project Browser** to turn on its display.

   > **Note:** Wall Details are a special type of elevation view in which only the studs, plates, girts, headers, and bridging used to frame an individual wall display.
   >
   > A Wall Detail view for each framed wall in your plan is automatically created by the program when its wall framing is built.
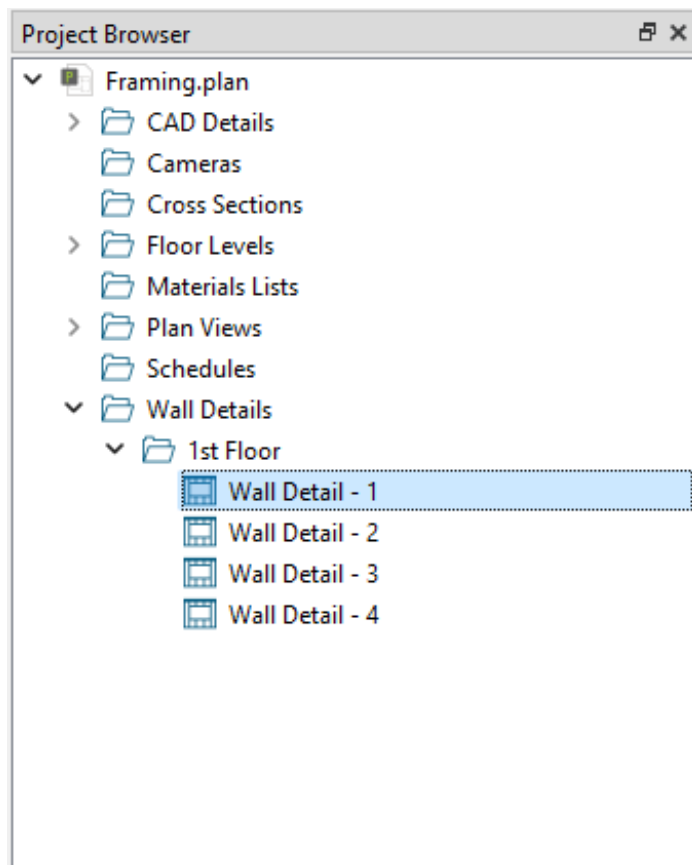
3. Floor and roof trusses can be edited by selecting and opening their specification dialog. The chord and webbing thicknesses can be set, as well as horizontal span and some additional options like Kingpost and Energy Heel.

   Additional information on each of the options in this dialog can be found by clicking the **Help** button at the bottom.

Roof Truss Specification

General
Line Style
Fill Style
Materials
Label
Components
Object Information
Schedule

Member Sizing

Top Chord:	3 1/2"
Bottom Chord:	3 1/2"
Webbing:	3 1/2"
Thickness:	1 1/2"

Maximum Horizontal Span

Top Chord:	60"
Bottom Chord:	75"

☐ Horizontal Blocking

Vertical Spacing:	24"	On Center
Rollout Offset:	24"	☑ Automatic

Options

☐ Require Kingpost	☐ Force Truss Rebuild
☐ End Truss	☐ Lock Truss Envelope And Webbing
☐ Energy Heel	☑ Use Special Snapping
☐ Drop Hip Truss	
☐ Reduced Gable	
☐ Attic Truss	
☐ Sloping Flat Truss	

4. Trusses can also be modified in the **Truss Detail**. A Truss Detail is a special CAD Detail window in which a diagram of each truss configuration present in the plan is drawn.

    The trusses in a Truss Detail are linked to the actual trusses in the plan. If you modify a truss in a Truss Detail, it will be modified in the model as well. To modify the information in a Truss Detail without affecting the model, use **CAD> CAD Detail From View** to create a line-drawn copy first.

    > **Note:** The Truss Detail is typically for display of trusses only. Editing the members that make up the trusses in the Truss Detail is possible and recommended only if absolutely necessary.

    To open a plan's Truss Detail, select **CAD> CAD Detail Management** from the menu, select the **Truss Detail**, then click **Open**.
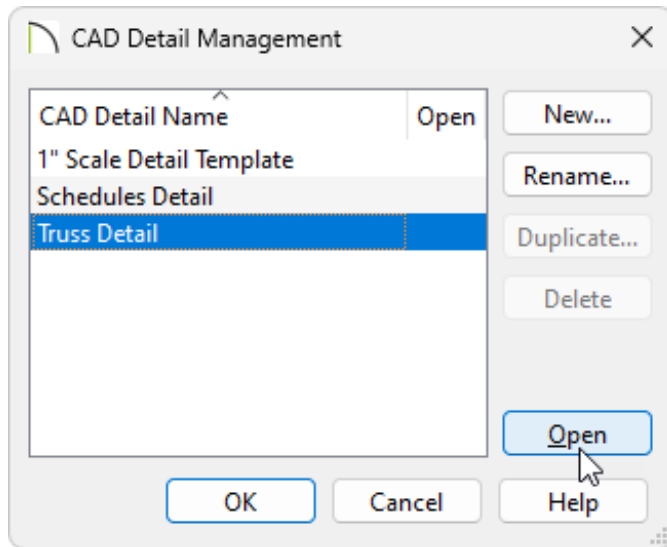
To change framing defaults in an existing plan

1. Before making changes that will affect floor, ceiling and/or roof plane heights, it is recommended that you first delete your framing - including wall framing.

   o Click On **Edit> Delete Objects** to open the **Delete Objects** dialog box.

   o Click the radio button beside **All Floors**.
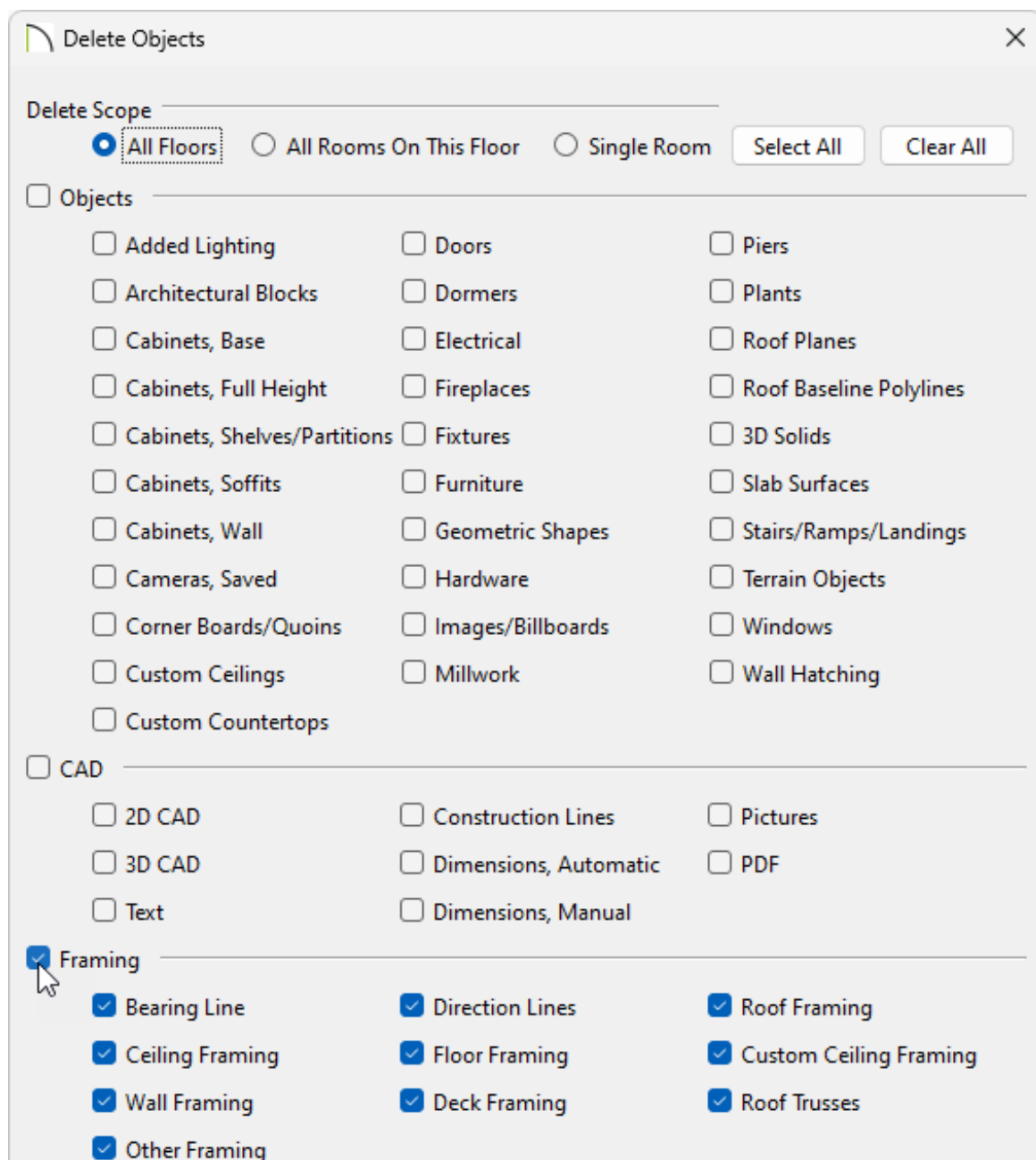
○ Check the boxes in the **Framing** category that you want to remove, or select the Framing heading to check all of the boxes in this category.

○ Click **Delete** to close the dialog and delete the specified framing objects in your plan.

2. If you are raising or lowering your floor and/or ceiling heights and you do not have Auto Rebuild Roofs turned on, you may need to raise or lower your roof manually.

○ To raise the roof planes enough to accommodate your changes, hold down the **Shift** key, select the roof planes you'd like to modify, then click the **Transform/Replicate Object** ⬚→⬚ edit button.

> To learn more about group selecting objects, such as roof planes, please see the appropriate resource in the Related Articles section below.

○ In the **Transform/Replicate Object** dialog that displays, check the box beside **Move**, select the **Relative To Itself** radio button, then specify the desired distance to raise or lower the roof planes along the **Z Delta**.

Transform / Replicate Object   ×

☐ Copy
    Number of Copies: 0

☑ Move
    X Delta: 0"   ● Relative To Itself
    Y Delta: 0"   ○ Absolute Location
                                     ○ Relative To Current Point
    Z Delta: 12"

    Angle: 0.0°   ○ Relative Angle To Itself
    Distance: 0"   ● Absolute Angle

☐ Rotate
    Angle: 0.0°   ● Relative Angle
                                     ○ Absolute Angle

☐ Resize
    Resize Factor: 1.0

☐ Reflect
                ● Horizontally (Change: Left <--> Right)
                ○ Vertically (Change: Top <--> Bottom)

Rotate / Resize / Reflect About
    X Position: 727 1/2"   ● About Object Center
    Y Position: 419 1/2"   ○ About Absolute Point
                                   ○ About Current Point

Number Style...   OK   Cancel   Help

A positive number here will raise the roof planes while a negative number will lower the roof planes.

3. Make the needed changes to your plan's structure and framing defaults.

    o Begin on the lowest floor and work upwards towards the attic.

    o Remember that changes made to the Framing and Floor Defaults will not affect any rooms that are not using the default values. For example, rooms with sunken floors should be examined individually and their heights adjusted as needed.

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Related Articles

Controlling Door and Window Framing (/support/article/KB-00985/controlling-door-and-window-framing.html)
Creating Roof Trusses (/support/article/KB-00981/creating-roof-trusses.html)
Deleting Objects From a Plan or Layout (/support/article/KB-00196/deleting-objects-from-a-plan-or-layout.html)
Displaying Framing in a Cross Section/Elevation View (/support/article/KB-00017/displaying-framing-in-a-cross-section-elevation-view.html)
Group Selecting Objects (/support/article/KB-00623/group-selecting-objects.html)
Manually Editing Wall Framing (/support/article/KB-00571/manually-editing-wall-framing.html)
Raising or Lowering a Roof Plane (/support/article/KB-00634/raising-or-lowering-a-roof-plane.html)
Troubleshooting Wall Framing Issues (/support/article/KB-00335/troubleshooting-wall-framing-issues.html)
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