Creating a Split Level Structure

The information in this article applies to:

Premier  Interiors

QUESTION

How do I create a split level floor plan?
A split level, sometimes referred to as a bi-level or tri-level, is a building where the floor level in one part of the structure is located about halfway between the floor and ceiling levels of another part of the structure. You can easily create a split level in Chief Architect by controlling the floor and ceiling heights of different rooms in a plan.

To create a split first floor level

1. Launch Chief Architect and open a New Plan.

2. Select Build> Wall> Straight Exterior Wall, then click and drag to draw a simple rectangular structure.

3. Still using the Straight Exterior Wall tool, draw a wall that divides the structure into two rooms.

4. Select the dividing wall and click the Open Object edit button. On the Roof panel of the Wall Specification dialog:
   - Check the box beside Lower Wall Type if Split by Butting Roof.
   - Then, select an interior wall type that is structurally similar to your exterior wall from the drop-down list and click OK.
○ For example, if your exterior wall type is "Siding-6", select "Interior-6" from the drop-down list.

5. Click the Select Objects button, then click in an empty space in one of the two room areas of your drawing to select it.

○ In this example, the room on the left side is selected.

6. Click the Open Object edit button, and on the STRUCTURE panel of the Room Specification dialog:

○ Raise the height of Floor. In this example, this value is increased to 48".

○ Press the Tab key on your keyboard to update the dialog and notice that the Relative Ceiling heights become smaller.
- Check the Default box next to Rough Ceiling and press the Tab key to restore a full height ceiling to this room.

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

7. Select 3D> Create Perspective View> Perspective Floor Overview to see the results so far.

8. The wall that divides the structure into two halves should have its exterior siding surface facing the room with the lower floor height.
If it does not, click the Select Objects button, then click on the wall.

The room may be selected first - press the Tab key or click the Select Next Object edit button to select the wall instead.

With the wall now selected, click the Reverse Layers edit button.

Remember that this wall has a Lower wall type when split by butting roof specified. When a roof is built over this structure, this wall will only have siding above the roof.

To add a foundation

In a split level home, part of the foundation is typically a slab or crawl space, and part is a full height basement - often, a daylight basement.

1. Select Build> Floor> Build Foundation from the menu to open the Build Foundation dialog. On the Foundation Options panel:

   - Leave Auto Rebuild Foundation unchecked.

   - In the Build Foundation dialog:
     - Select Walls with Footings.
     - Set Slab Thickness to 4".
     - Set Minimum Height to 24" including a 1 1/2" sill plate.
     - Set Basement Ceiling Height to 20".

   - Click on the Edit Default Slab Footing button to make any necessary adjustments.

   - Click on the Edit Default Foundation Wall button to make any necessary adjustments.

   - Click on the Hang 1st Floor Platform Inside Foundation Walls checkbox.

   - Click on the Show S Markers on Stepped Foundation Footings checkbox.

   - Click on the Reverse Layers button to ensure proper layering.

   - Click on the Build Foundation button to complete the foundation.
Select **Walls With Footings** as the Foundation Type.

Specify the **Minimum Height** under the **Stem Walls** heading.

In this example, a height of 24" is used.

Make any other needed changes, then click **OK**, then **OK** again to close the dialog and generate a foundation on Floor 0 based on the 1st floor plan.

2. While still on Floor 0, create a **Perspective Floor Overview** to see what this foundation looks like.

![Foundation Diagram]

Notice that the Minimum Stem Wall height is applied to the part of the structure with the lower, default floor height. The stem walls under the area with the raised floor are taller but have the same footing height.

3. Click the **Select Objects** button, then click on an inside wall surface of the foundation room below the part of the structure with the raised floor height (in this example, the left room).
4. Click the **Open Object** edit button, and on the **Structure** panel of the **Room Specification** dialog:
Notice that the **Stem Wall** height value is equal to the Minimum Stem Wall Height that you specified in the Build Foundation dialog plus the height of the Floor of the room above.

Increase the **Rough Ceiling** value so that the room is full height.

In this example, it's raised to 109 1/8".

Press the **Tab** key and notice that the **Stem Wall** height increases to accommodate the new ceiling height.

Also on the **Structure** panel, make sure that the box beside **Floor Under This Room** is checked.

Click **OK** to close the dialog and apply your change.
5. The Floor Overview updates to show the change that you made to the room.

6. Select **File > Close View** to close the camera view and return to floor plan view.

To add a second floor

If you build an additional floor above the first floor level, bear in mind that the ceiling heights on Floor 1 will be reset to the default.

1. Select **Build > Floor > Build New Floor** from the menu.
   - Derive new 2nd floor plan from the 1st floor plan.
   - Specify the desired default Ceiling height in the **Floor 2 Defaults** dialog and hit **OK** to build an additional floor level.

2. Divide the second floor the same as the first floor. Select **Tools > Reference Floors > Reference Floor Display** to turn on the reference display so the walls can be accurately aligned between the floors.
3. Select the dividing wall just created and click the **Open Object** edit button. On the **ROOF** panel of the **Wall Specification** dialog:

- Check the box beside **Lower Wall Type if Split by Butting Roof**.
- Then, select an interior wall type that is structurally similar to your exterior wall from the drop-down list and click **OK**.

4. Go **Down One Floor** to Floor 1, then select the room with the raised Floor height and click the **Open Object** edit button.

- Notice that its Rough Ceiling height has been reset to the default.
- Check the **Default** box beside **Rough Ceiling** and click **OK**.
- Select the dividing wall on the first floor, and click the **Open Object** edit button. On the **WALL TYPES** panel, select an interior wall type, and then click **OK**.

5. Go **Up One Floor** and repeat this process for the room area directly above the one you just modified, however, don't make any additional Wall Type modifications to the dividing wall like mentioned in Step 4.
6. Once all floor levels are in place and the ceiling heights are specified as needed, you can build the roof and draw interior walls as needed.

Related Articles

- Creating a Split Level Entry
- Creating a Walk-out Basement (/support/article/KB-00376/creating-a-walk-out-basement.html)