

Modeling a Sloping Terrain for a Walk-out Basement

Reference Number: **KB-00718**

Last Modified: **July 20, 2021**

The information in this article applies to:



QUESTION

I want to create a walk-out, or daylight basement on a sloping lot. How can this be accomplished?




ANSWER

Creating a walk-out basement on sloping terrain is easy in Home Designer when you follow the steps below.

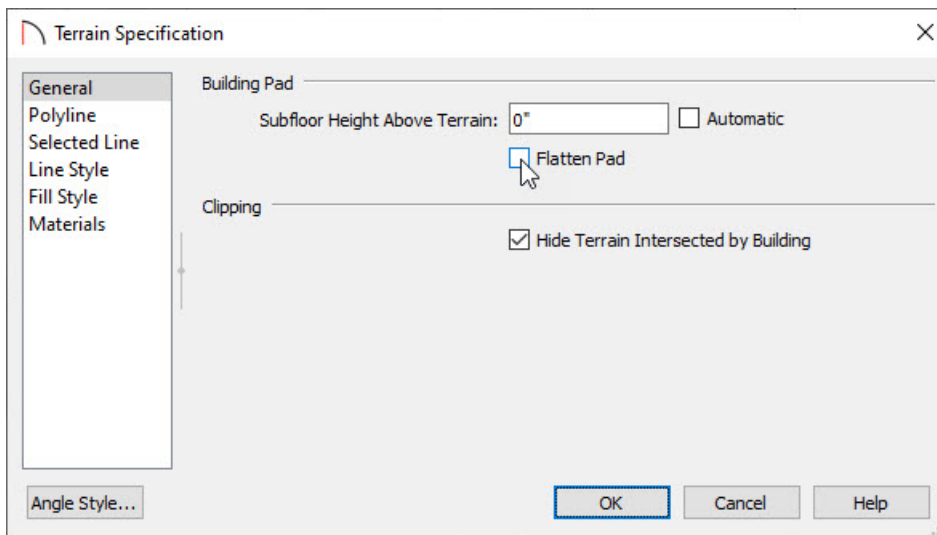
Before entering your terrain data, change the terrain settings to avoid having the house float too low or too high in the terrain. The steps in this article work equally well whether you already have a house drawn, or if you are just starting with a new blank plan.

To set the house at a specific elevation

1. Select an elevation level that corresponds with the level of the first floor.
2. Select the Terrain Perimeter of the plan and click the **Open Object**  edit button.

Note: If you have not yet generated a Terrain Perimeter in your plan, go to Floor 1 and select Terrain> Create Terrain Perimeter from the menu.


3. On the **GENERAL** panel of the **Terrain Specification** dialog, remove the checkmarks next to both **Automatic** and **Flatten Pad**.



4. Click **OK** to apply these settings.


Next, enter elevation data to create a sloped lot. To get a smooth, straight slope, enter elevation lines all the way across the Terrain Perimeter and enter several elevation lines to minimize dramatic elevation changes.

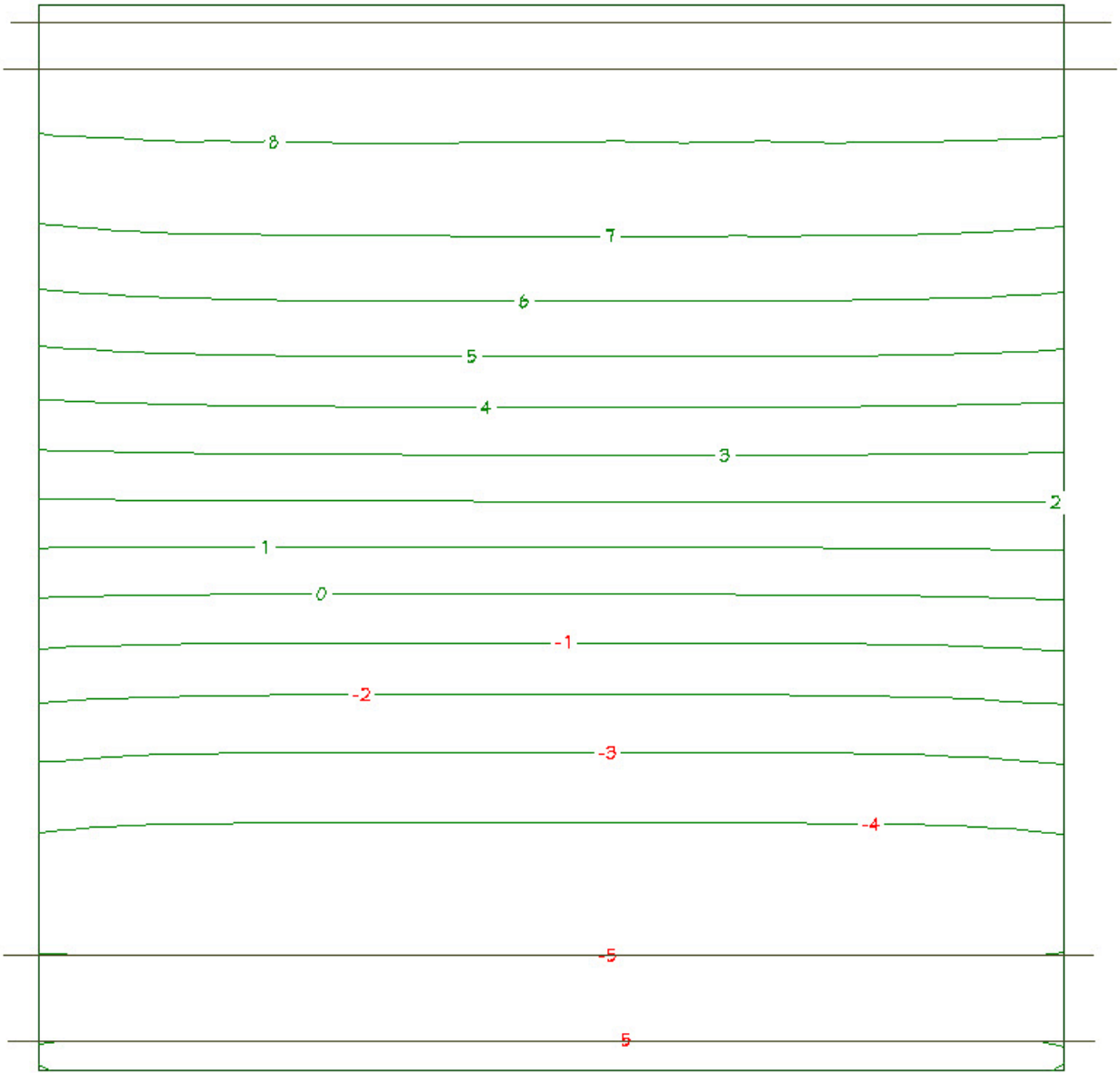
To create a sloped lot

1. Add new elevation data to create the desired terrain by selecting **Terrain> Elevation Data> Elevation Line** 


Level areas can be created by placing several Elevation Lines at the same height or using an **Elevation Region**

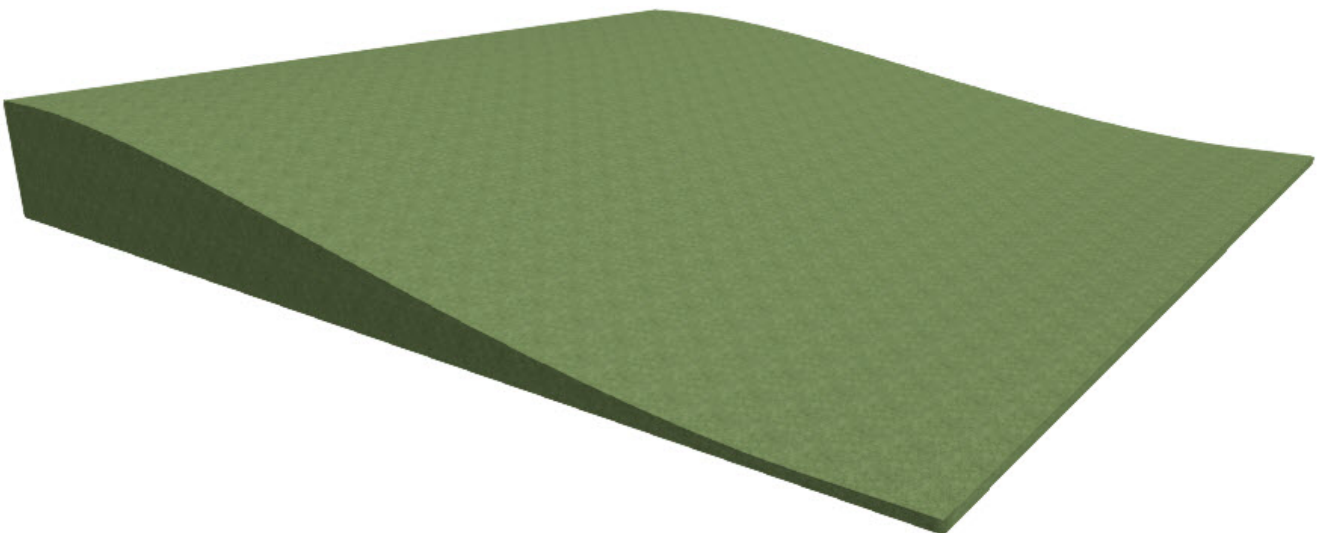


2. When your elevation data is in place, click **Terrain> Build Terrain** . The program automatically generates green contour lines between the Elevation Lines that you entered.



The numbers on the dimension lines for positive values will show on the elevation line in green, and negative value numbers will display as red.

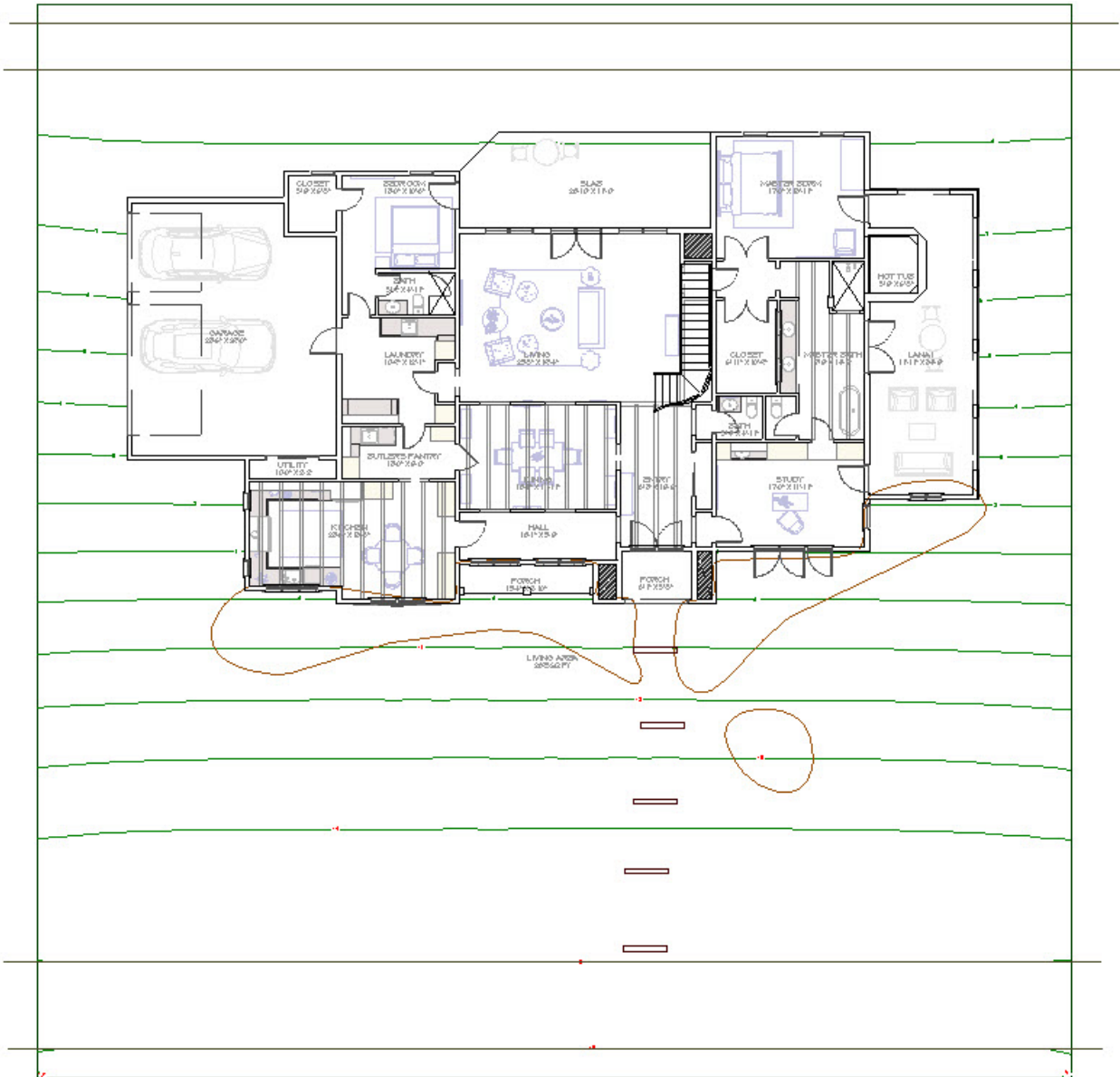
3. To see the results of your elevation data in 3D, select **3D> Create Camera View> Full Overview** .




When you have created your terrain, you are ready to build the structure. Remember that the instructions in the first section of this article allow you to build with the first floor of your building approximately 18 inches higher than the terrain.

To create a walk-out basement

1. Build the first floor of your plan at the location of the slope in your terrain.



You may need to adjust either the floor height, or some of the elevation data, up or down to get the first floor to be displayed where you want it with relation to the terrain.

2. Finally, select **Build > Floor > Build Foundation**  to create a basement level with stem walls of at least 100 inches (8 feet plus 4 inches for the foundation slab).
3. After you have generated your foundation, you are ready to move walls, adjust materials, add fixtures and furnishings, and otherwise customize your walkout basement.

If you create a new blank foundation, you may find it helpful to turn on the Reference Display to draw in Foundation walls on Floor 0 relative to the positions of the walls above them on Floor 1.

Related Articles

- 🏠 [Creating a Window Well for an Egress \(/support/article/KB-00862/creating-a-window-well-for-an-egress.html\)](/support/article/KB-00862/creating-a-window-well-for-an-egress.html)
- 🏠 [Editing Terrain to Create a Daylight Basement \(/support/article/KB-00868/editing-terrain-to-create-a-daylight-basement.html\)](/support/article/KB-00868/editing-terrain-to-create-a-daylight-basement.html)