

Creating a Walkout Basement

Reference Number: **KB-00376**

Last Modified: **December 16, 2024**

The information in this article applies to:



QUESTION


I am trying to create a walkout basement on sloping terrain. How do I do this?

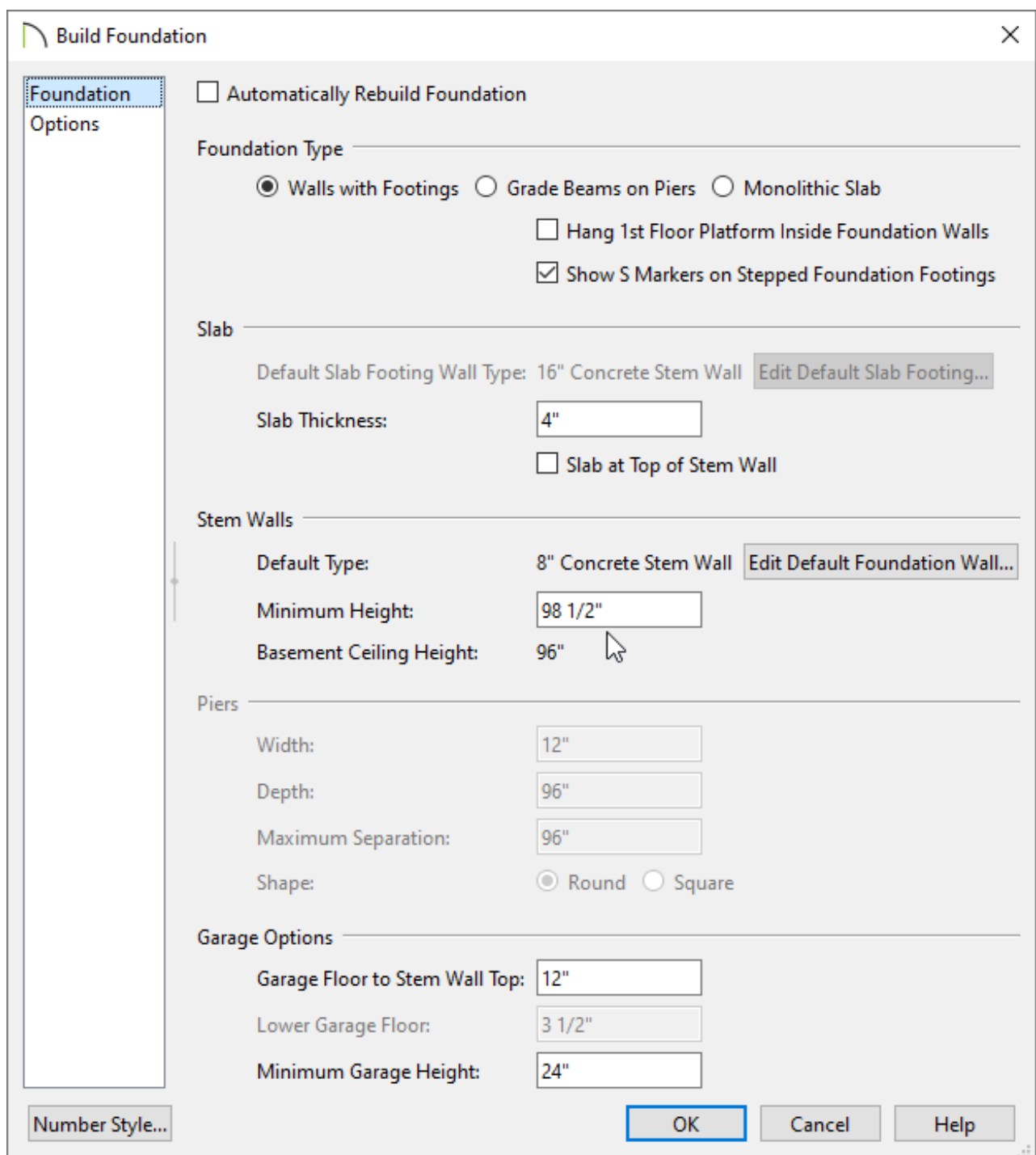


ANSWER

By default, the program will produce a flat building pad under your plan, which is helpful in many situations but not when you want to model a walkout or daylight basement on sloping terrain.

To create a walkout basement

1. If you have not done so already, create a foundation by navigating to **Build > Build Floor > Build Foundation** , and create a basement level with a **Minimum Height** of at least 98 1/2" inches.



Build Foundation

Automatically Rebuild Foundation

Foundation Type

Walls with Footings Grade Beams on Piers Monolithic Slab

Hang 1st Floor Platform Inside Foundation Walls

Show S Markers on Stepped Foundation Footings

Slab

Default Slab Footing Wall Type: 16" Concrete Stem Wall [Edit Default Slab Footing...](#)

Slab Thickness: 4"

Slab at Top of Stem Wall

Stem Walls

Default Type: 8" Concrete Stem Wall [Edit Default Foundation Wall...](#)

Minimum Height: 98 1/2"

Basement Ceiling Height: 96"

Piers

Width: 12"

Depth: 96"

Maximum Separation: 96"

Shape: Round Square

Garage Options

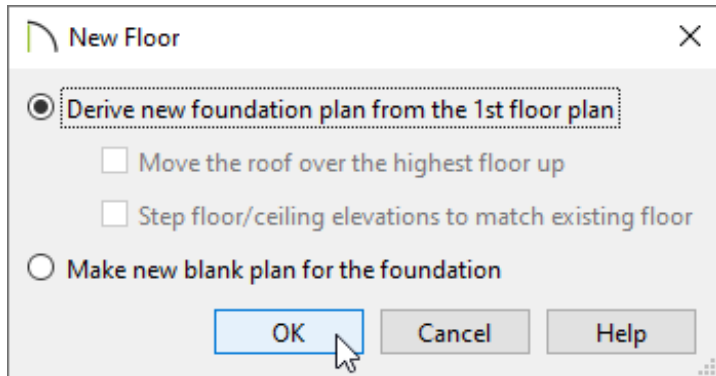
Garage Floor to Stem Wall Top: 12"


Lower Garage Floor: 3 1/2"

Minimum Garage Height: 24"


[Number Style...](#) [OK](#) [Cancel](#) [Help](#)

2. In the **New Floor** dialog that displays next, choose to **Derive new foundation plan from the 1st floor plan**, then click **OK**.



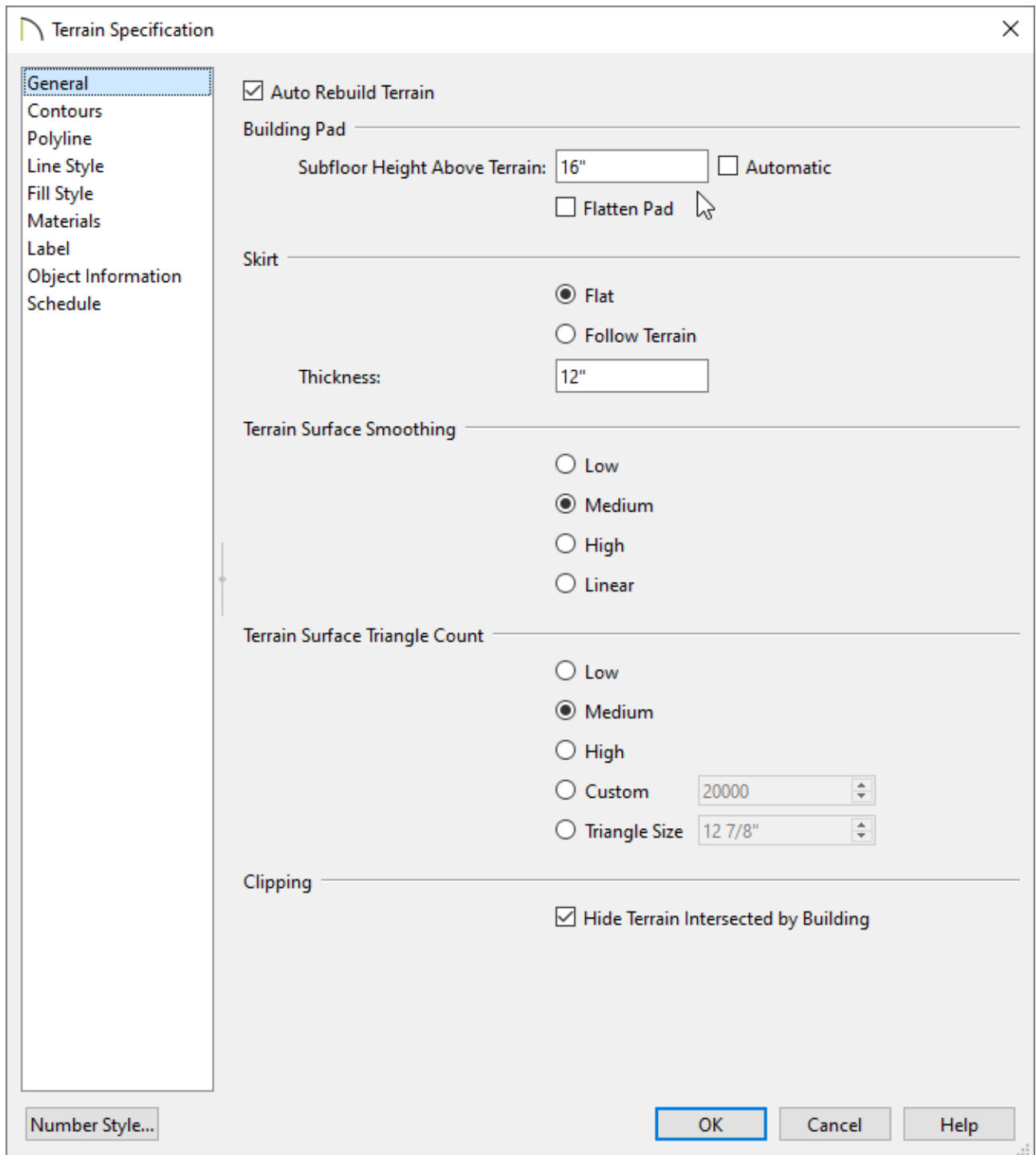
3. (Optional) If your foundation walls will consist of two different wall types and/or materials, consider defining these walls as pony walls. You may also want to create a stepped effect for your foundation. Please see the [Related Articles](#) section to learn more about these topics.
4. On Floor 0, which is your foundation level, select **Terrain> Create Terrain Perimeter**  from the menu to create a terrain perimeter in your plan. This will create a 100' x 50' flat terrain pad surrounding your structure.




If the 'Create Terrain Perimeter' option is grayed out and inaccessible, an existing terrain perimeter may already exist.

5. Next, navigate to **Terrain> Terrain Specification** , and on the **GENERAL** panel of the **Terrain Specification** dialog that displays, uncheck the **Automatic** box next to Subfloor Height Above Terrain, specify an appropriate value in this field, then click **OK**.

in this example, a value of 16" is specified.

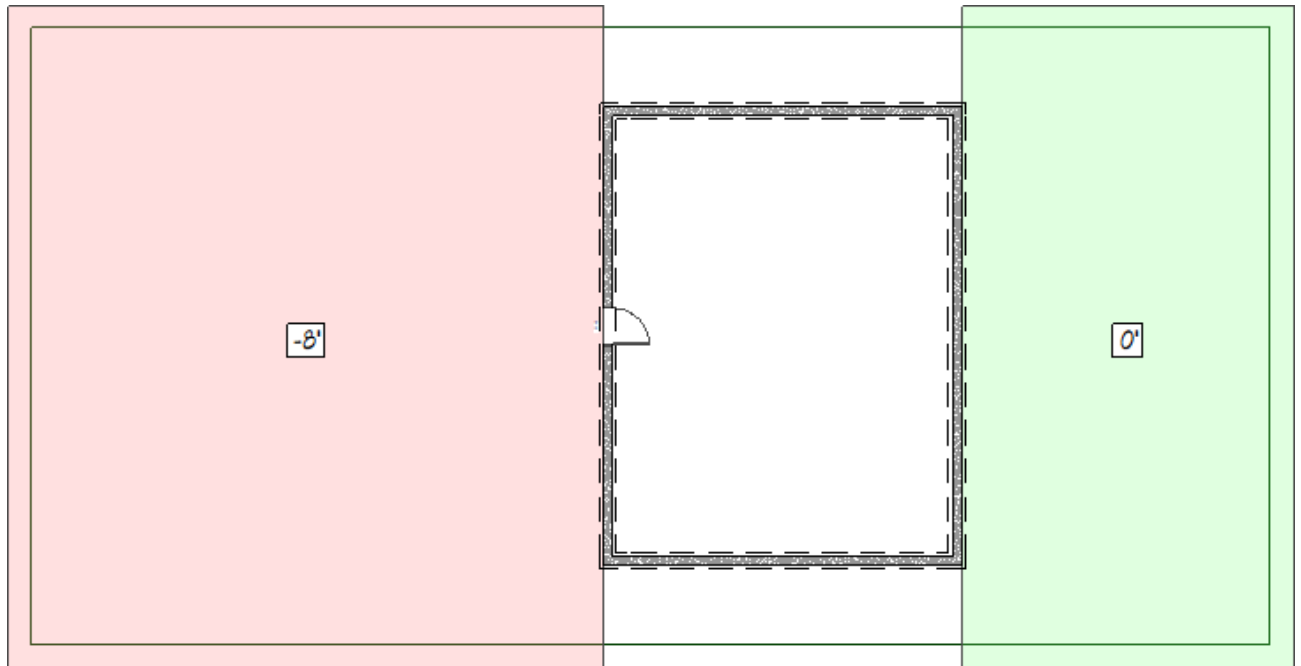
The Subfloor Height Above Terrain value is the distance between Floor 1 and the terrain at the building footprint center.



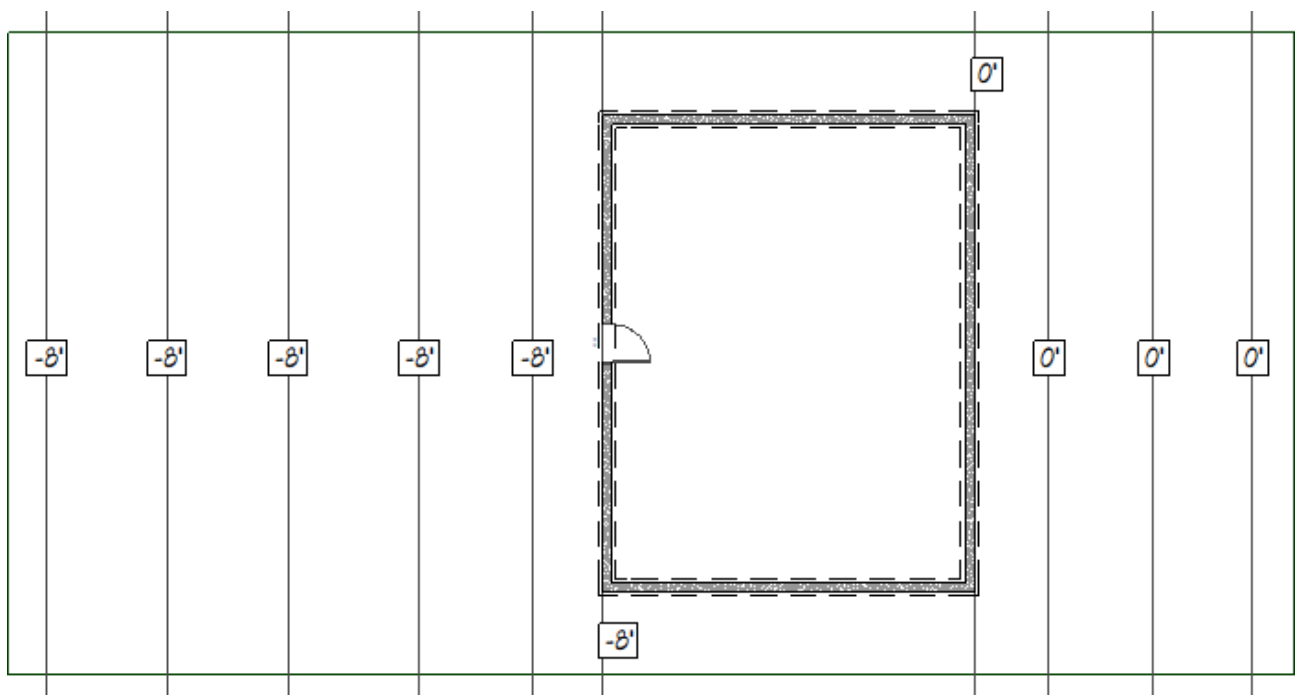
- Now, we can modify the slope of the terrain. Navigate to **Terrain> Elevation Data** , select the **Elevation Line**  and/or **Elevation Region**  tools, then click and drag to create elevation lines/regions in various areas of the terrain perimeter.


In this example, two elevation regions are used. The first region starts at the bottom

(ledge edge) and is set to have an Elevation of -96" (8'). For demonstration purposes, this is represented with a light red fill in the image above. The second region starts at the top (right edge) and is set to have an Elevation of 0". For demonstration purposes, this is represented with a light green fill in the image above.

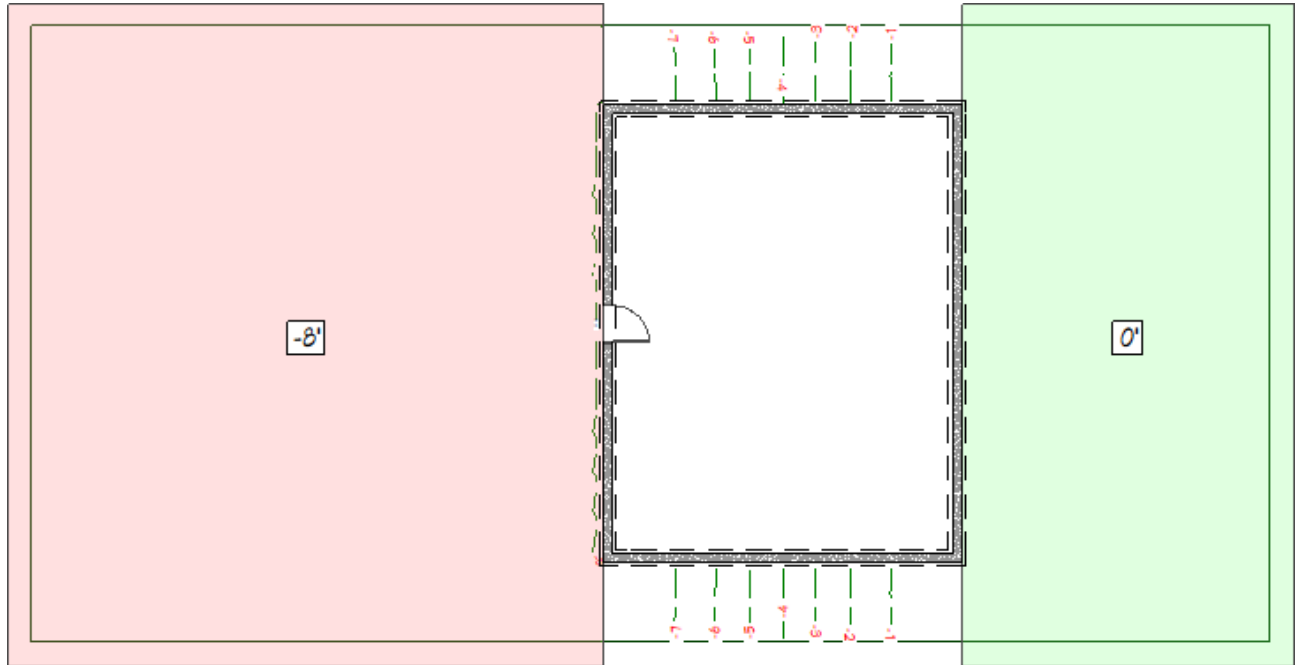



Elevation lines can also be used to create a similar effect, though several additional lines may need to be placed if flat areas are wanted throughout the terrain. Please reference the following image and note the placement and Elevation of each of the lines.



7. When your elevation data is in place, select **Terrain> Build Terrain**  from the menu. The program automatically generates contour lines between the elevation lines that you drew.

In this example, you can see green contour lines with red labels. The labels are red, as the contours are at negative values.



8. To see the results, create a 3D view by navigating to **3D> Create Perspective View> Perspective Full Overview** .

Related Articles

- [📄 Creating a Stepped Foundation \(/support/article/KB-01809/creating-a-stepped-foundation.html\)](/support/article/KB-01809/creating-a-stepped-foundation.html)
- [📄 Drawing a Pony Wall \(/support/article/KB-00064/drawing-a-pony-wall.html\)](/support/article/KB-00064/drawing-a-pony-wall.html)
- [📄 Generating Contour Lines on the Terrain \(/support/article/KB-00590/generating-contour-lines-on-the-terrain.html\)](/support/article/KB-00590/generating-contour-lines-on-the-terrain.html)



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