

Generating Contour Lines on the Terrain

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The information in this article applies to:



QUESTION

I cannot get my terrain elevation data and modifiers to display correctly - either terrain modifiers are missing or the software is not following the values for my terrain lines. Why is this occurring?

ANSWER

Overlapping terrain modifiers may not be showing the information you intended for that area or the software is trying to create smooth transitions between different elevation information.


Getting Terrain Modifiers to Display in 3D Views


If you have added Terrain Modifiers such as Hills and Valleys to your terrain at the same location as a Flat Region, the flat region will have priority over the hills and valleys.

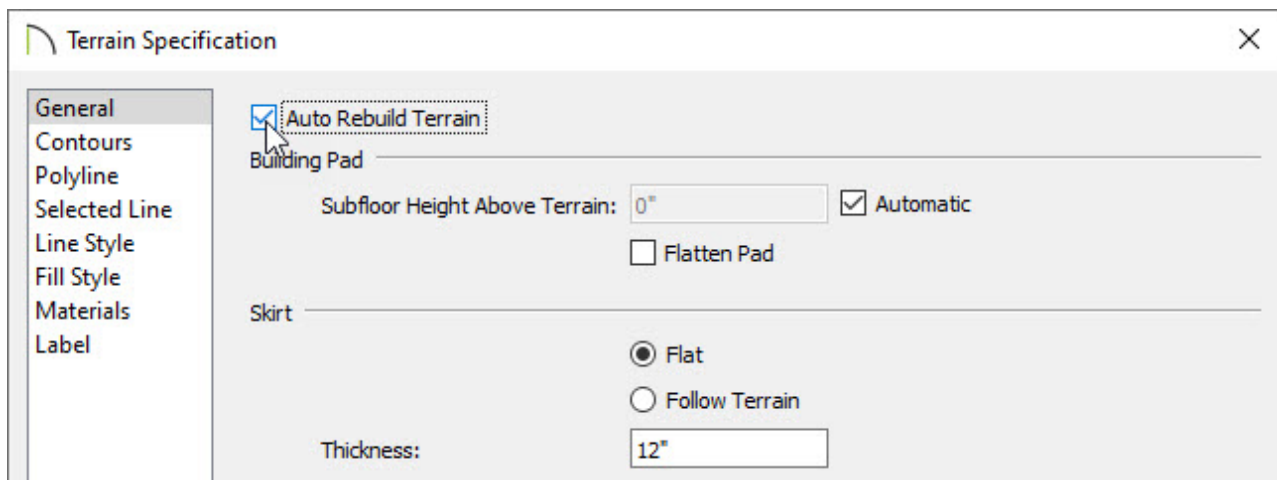
When working with Terrain Modifiers such as Hills and Valleys, it is important to remember that Chief Architect assigns a greater priority to the Flat Region than it does to other types of modifiers. That means that if a flat region occupies the same space as a hill

or valley, the hill or valley will appear flat in a 3D or camera view.

One solution to this issue is to move the flat region to a different part of the drawing, thus enabling the hills and valleys to generate as expected. A second solution is to make the flat region smaller so that it doesn't surround the other Terrain Modifiers.

Remember that whenever a change is made to the terrain, you must select **Terrain> Build Terrain**  from the menu to apply the changes you have made to the drawing.

If you want your terrain to update when a 3D view is taken, select **Terrain> Terrain Specification** , then check the option to **Auto Rebuild Terrain**, and click **OK** to apply the change.

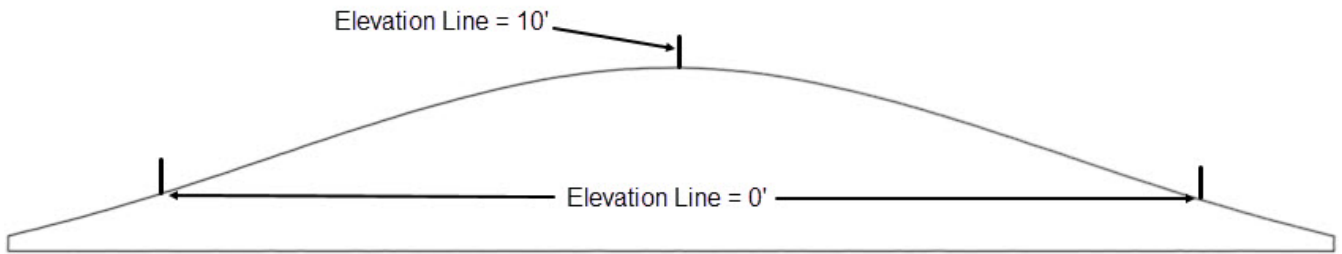


Note: If your terrain is not displaying at all in your 3D Camera views, turn on the display of your Terrain layers in the appropriate layer set for the view.

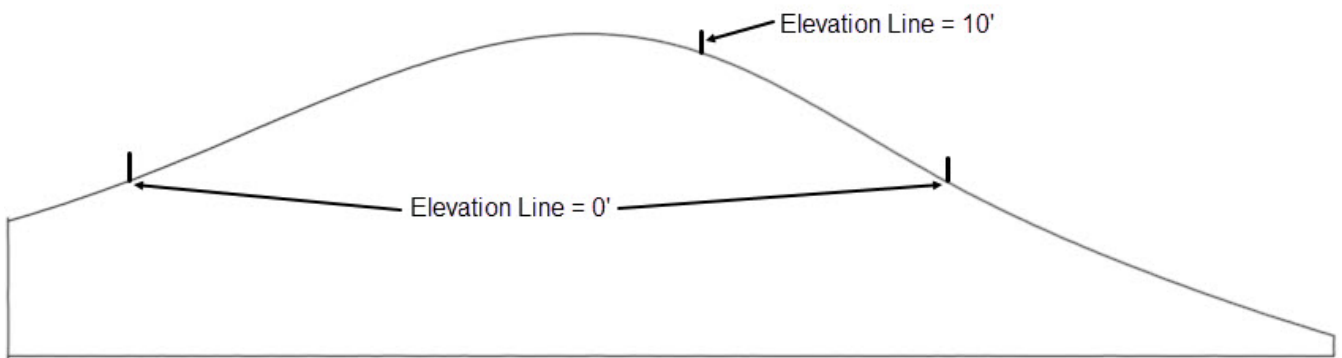
How Chief Architect Interprets Elevation Lines

Understanding how Chief Architect interprets elevation lines can help you create the exact terrain you want without having to constantly mess around with the placement of elevation lines.

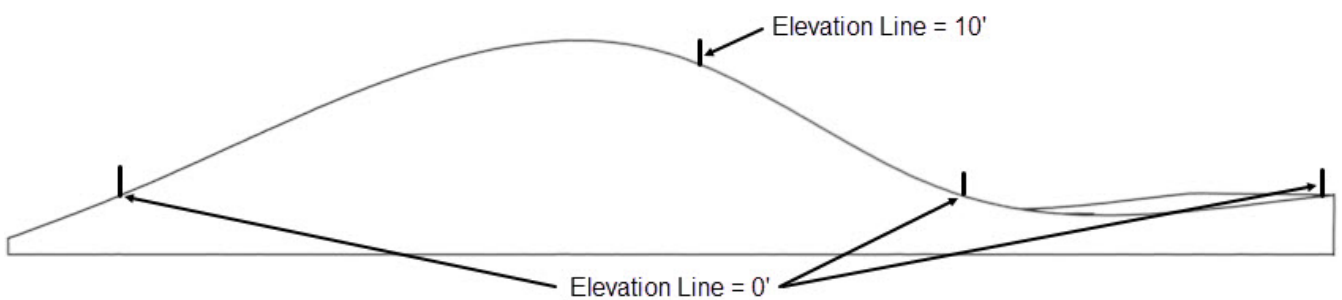
In the first image below, you see a cross section view showing evenly spaced terrain lines. Note that the curve created is gentle, but past the ends where the terrain lines are at 0, the slope continues to drop until it reaches the terrain perimeter.



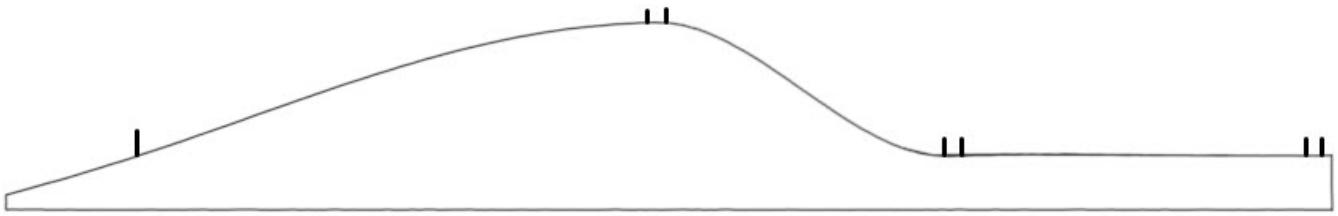
In the second image below, you see what happens as you move one of the outer terrain lines closer to the middle. Notice now how the terrain really dives down past the line 0 and continues down at an increasing rate. Also note that the high point in the terrain is not the 10' line as you might expect. What happens here is that Chief is trying to fit a smooth curve through the three points in the terrain.



As we look at the next picture, notice that we have added a third 0 line out near the edge. Notice now how the terrain dips and comes back up to meet this line.



Suppose we want to create even slopes from the 10' mark, and make the terrain flat between the two 0 level terrain lines. We can do this by adding two more lines. One will be at 10' and one at 0. We will place them in close proximity to the two middle lines. Note the effect below on the terrain.





So by using careful placement of a few terrain lines, you can achieve various terrain situations.

If you wish to see the elevations of each terrain line in plan view, you can turn on the Elevation, Labels layer in X13 and newer program versions.

Using the Trim and Extend Tools on Elevation Lines

In X12 and newer program versions, the trim and extend objects edit tools can be used on elevation lines.

1. Draw a CAD line that you want to extend or trim to, then select it. If this line is being used for trimming, it must intersect all the lines you intend to trim.
2. Choose the **Trim Object(s)**  or **Extend Object(s)**  tool respectively.
3. Click on the elevation line you want to trim or extend. If you are trimming an elevation line, click on the side of the trimming line that you want to remove.



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