

Creating a Custom In-ground Swimming Pool

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The information in this article applies to:



QUESTION



I would like to create a custom in-ground swimming pool. How do I do this?



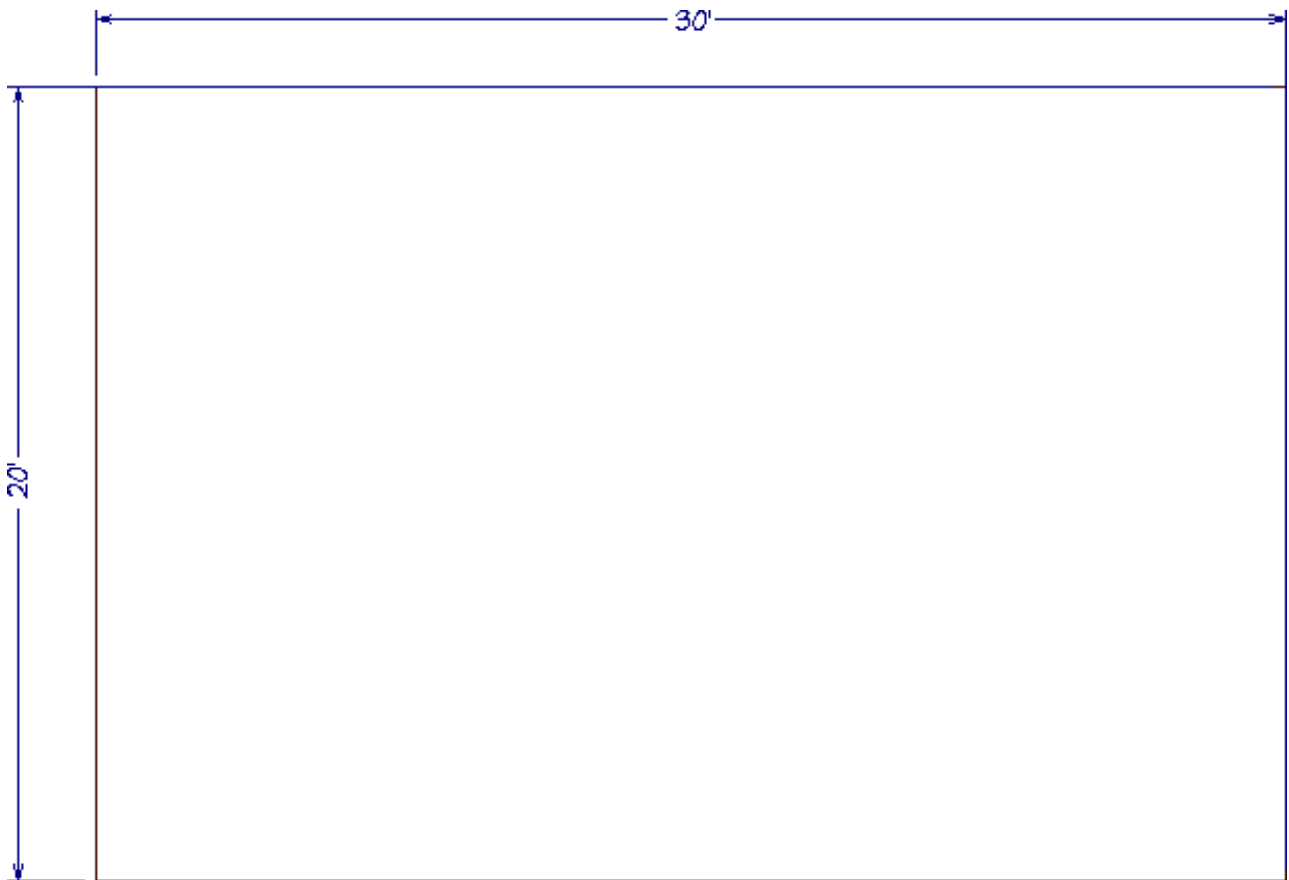
ANSWER

Using the terrain features, 3D/polyline solids, and molding polylines, you can create a custom in-ground swimming pool.

To create a hole for the pool


1. Select **Terrain> Create Terrain Perimeter**  from the menu to create terrain in which the pool can be designed. You can skip this step if you have a terrain perimeter already drawn.
2. Select **Terrain> Feature> Rectangular Feature**  from the menu, then click and drag to draw a rectangular feature polyline contained inside the terrain perimeter.

In this example, a 20' x 30' rectangular polyline is used.

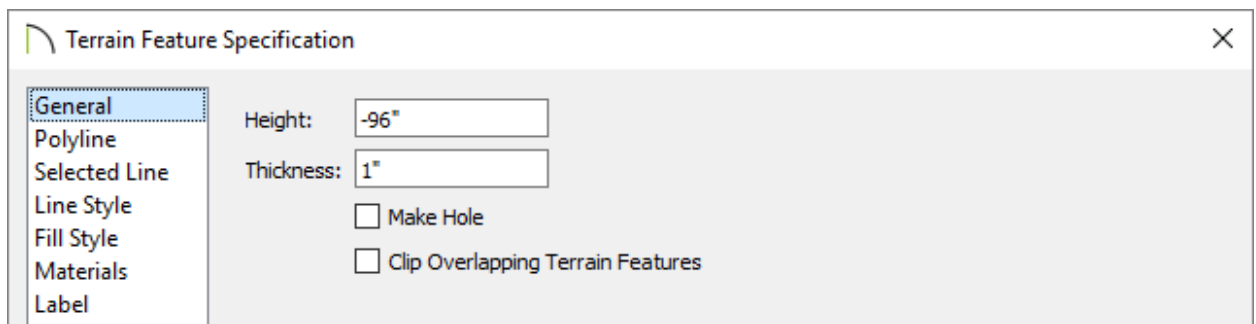



This polyline will form the hole for the swimming pool.

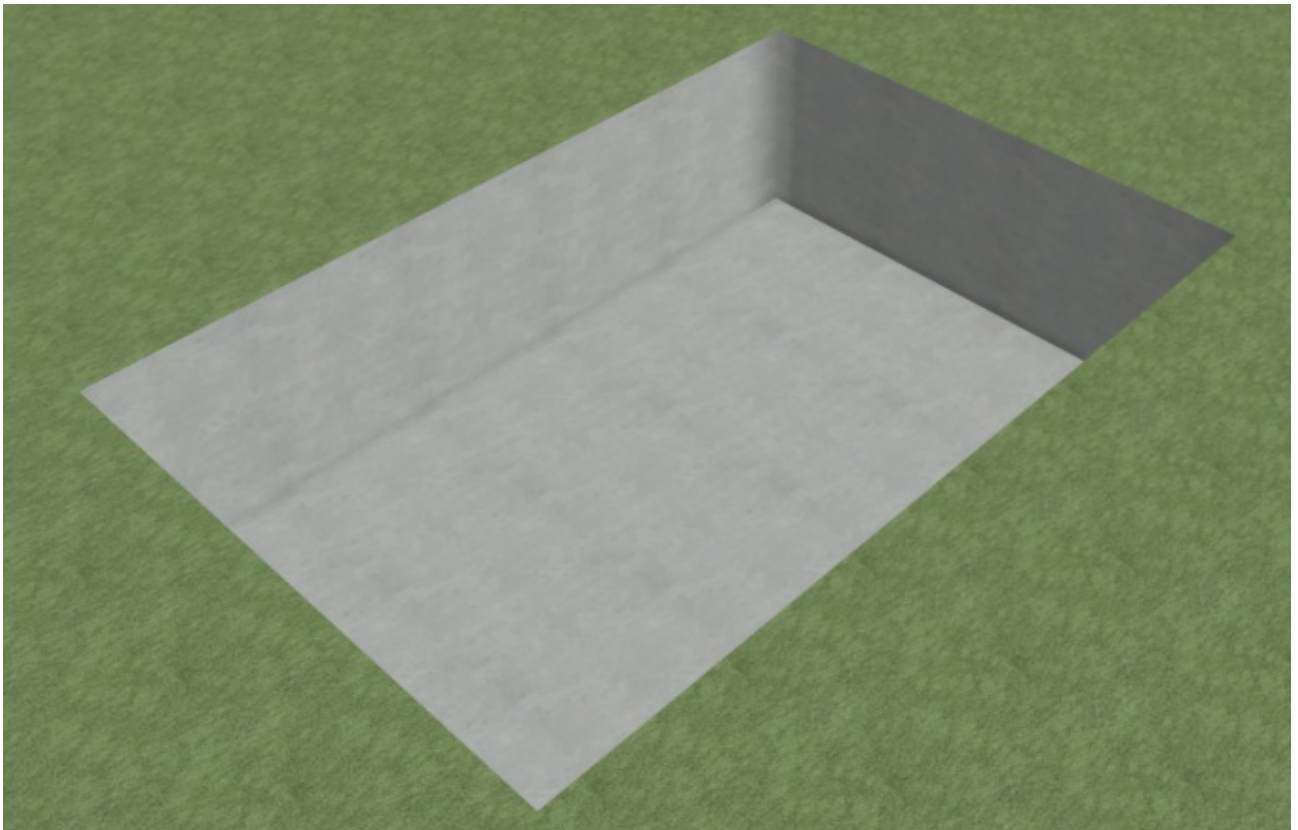
Features follow the contours of your terrain. If you place a feature on a slope, it will follow the slope rather than form a flat area. If your terrain is sloped, use Elevation Lines or a Flat Region to create a level area to place your pool in.

3. Select the polyline and click the **Open Object**  edit button.
4. On the **GENERAL** panel of the **Terrain Feature Specification** dialog that opens:
 - Change the **Height** to the desired depth of the pool's deepest point.

In this example, -96" is used.




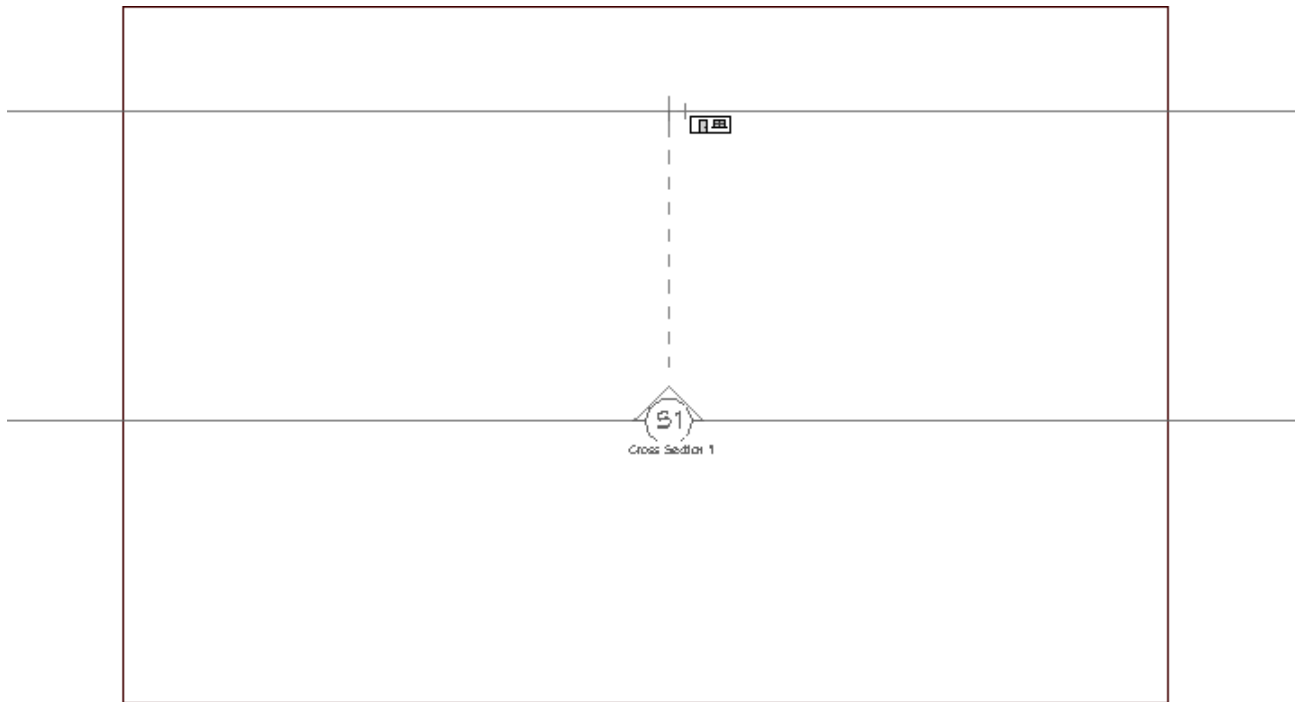
- Click **OK** to close the dialog and apply your changes.
5. Next, select **3D> Create Perspective View> Perspective Full Overview**  to see the results so far.




6. Once you have verified the camera view, select **File> Close View** to return to a floor plan view.

To slope the bottom of the pool

1. Select **3D> Create Orthographic View> Back Clipped Cross Section** , then click and drag a camera arrow that runs perpendicular to the slope that you wish to create.

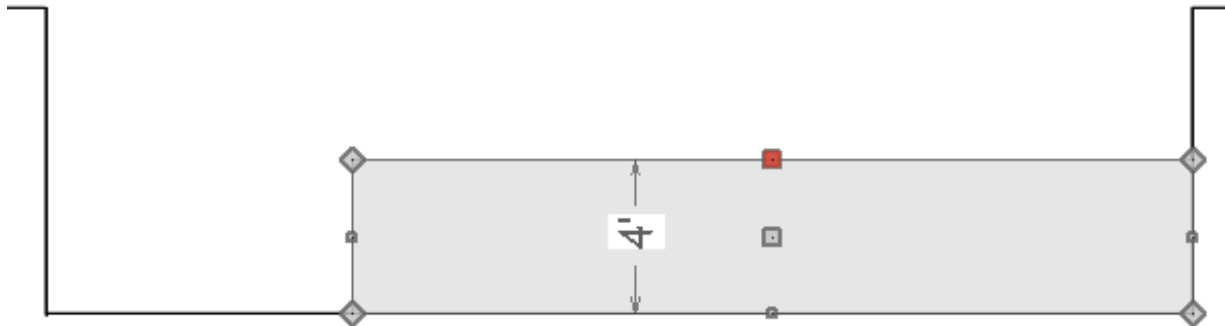



2. In the back clipped cross section view, select **CAD> Boxes> Rectangular Polyline**  from the menu, then click and drag to draw a rectangle along the bottom part of the pool.

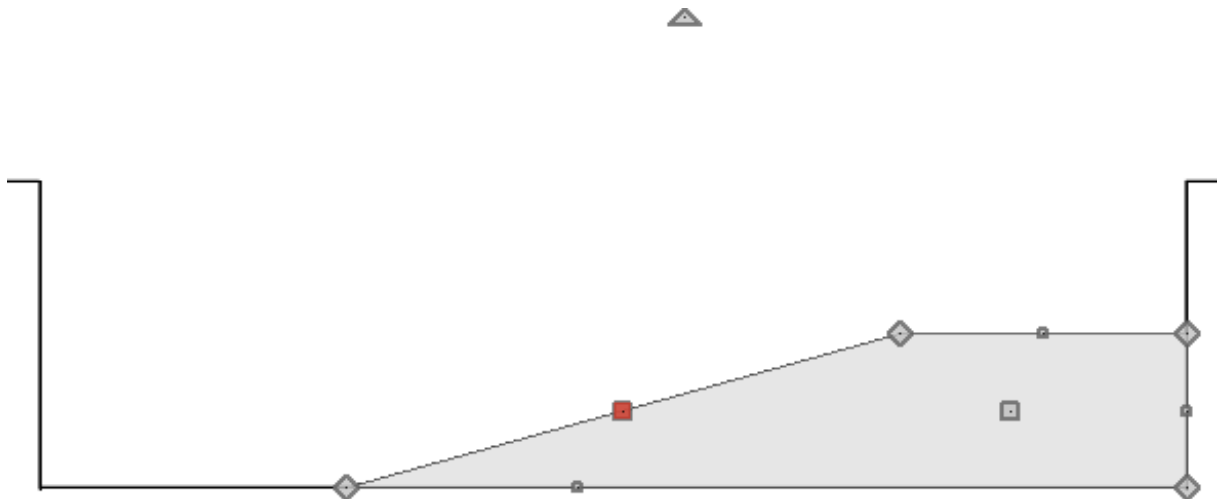
This rectangle will form the shallow end of the pool, as well as the slope to the deep end.


3. Click on the top edge of the polyline to select it, then click on the temporary dimension that displays between it and the bottom edge to specify the height above the deep end that you would like the shallow end to be.

In this example, 48" is used.



4. With the rectangle still selected, click the **Add Break**  edit button and click along the top edge of the rectangle to place a break at that location.
5. Next, drag the top left corner down to create a slope, as shown in the image below.

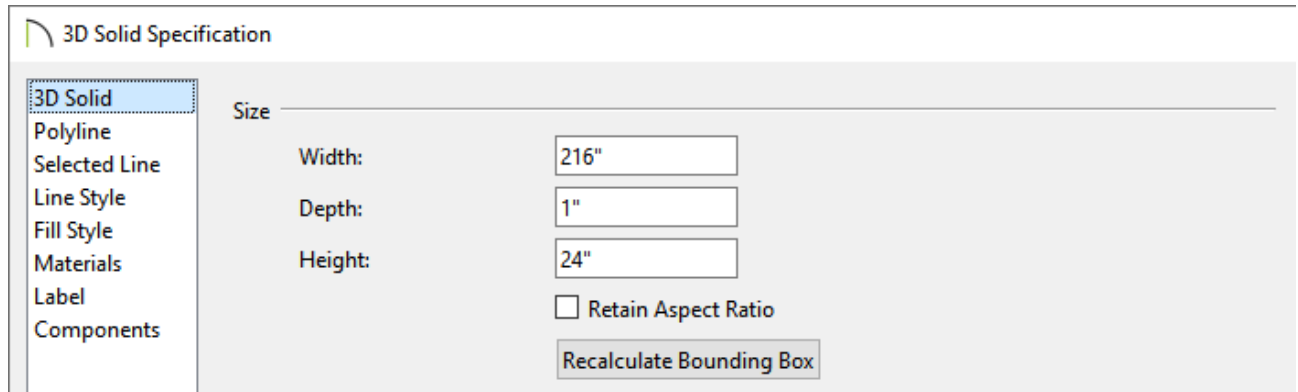


6. With the rectangular polyline still selected, click the **Convert Polyline**  edit button, and in the **Convert Polyline** dialog that displays, choose the **3D Solid** option, then click **OK**.

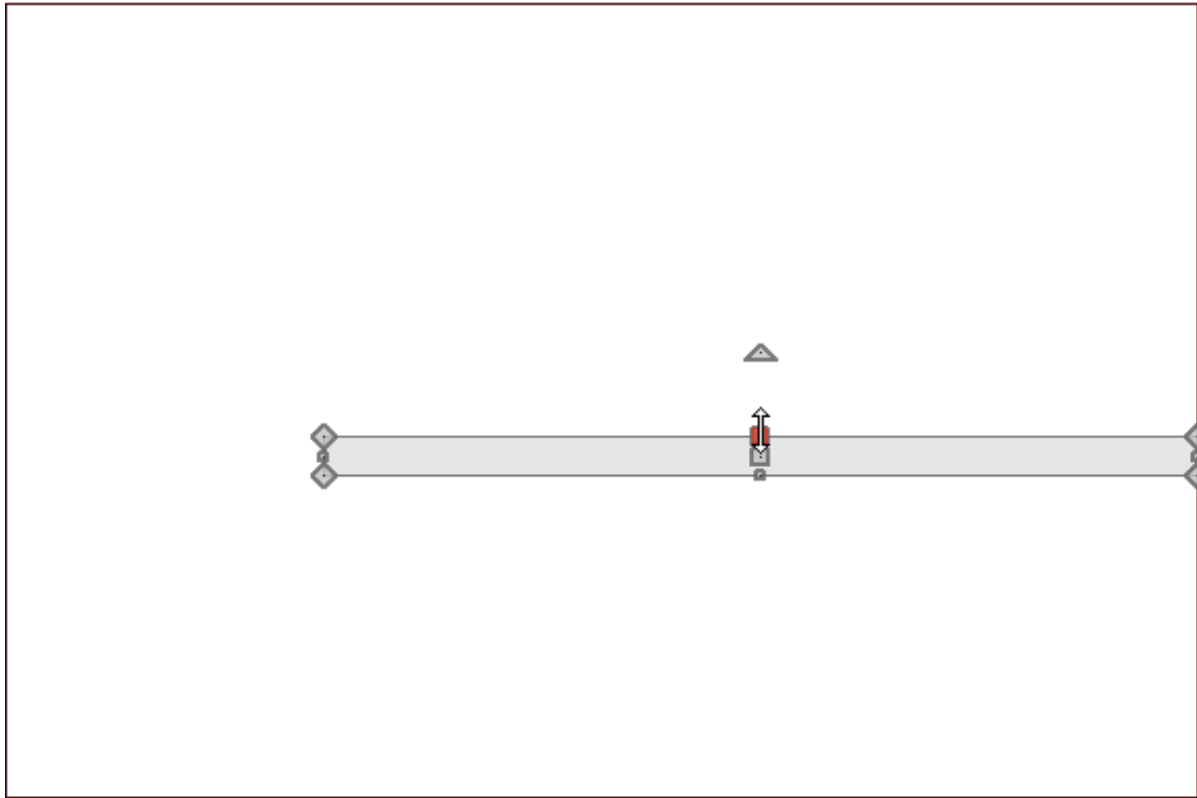
In Chief Architect X13 and prior versions, 3D Solids were called Polyline Solids.

7. On the **GENERAL** panel of the **3D/Polyline Solid Specification** dialog that opens next, change the **Height** or **Thickness** to your desired value, then click **OK**.



In this example, a value of 24" was used.



8. Select **File> Close View** to close the back clipped cross section view and return to a floor plan view.
9. In a floor plan view, select the newly-created 3D/polyline solid and use the edit handles to adjust its width to match the width of the pool.

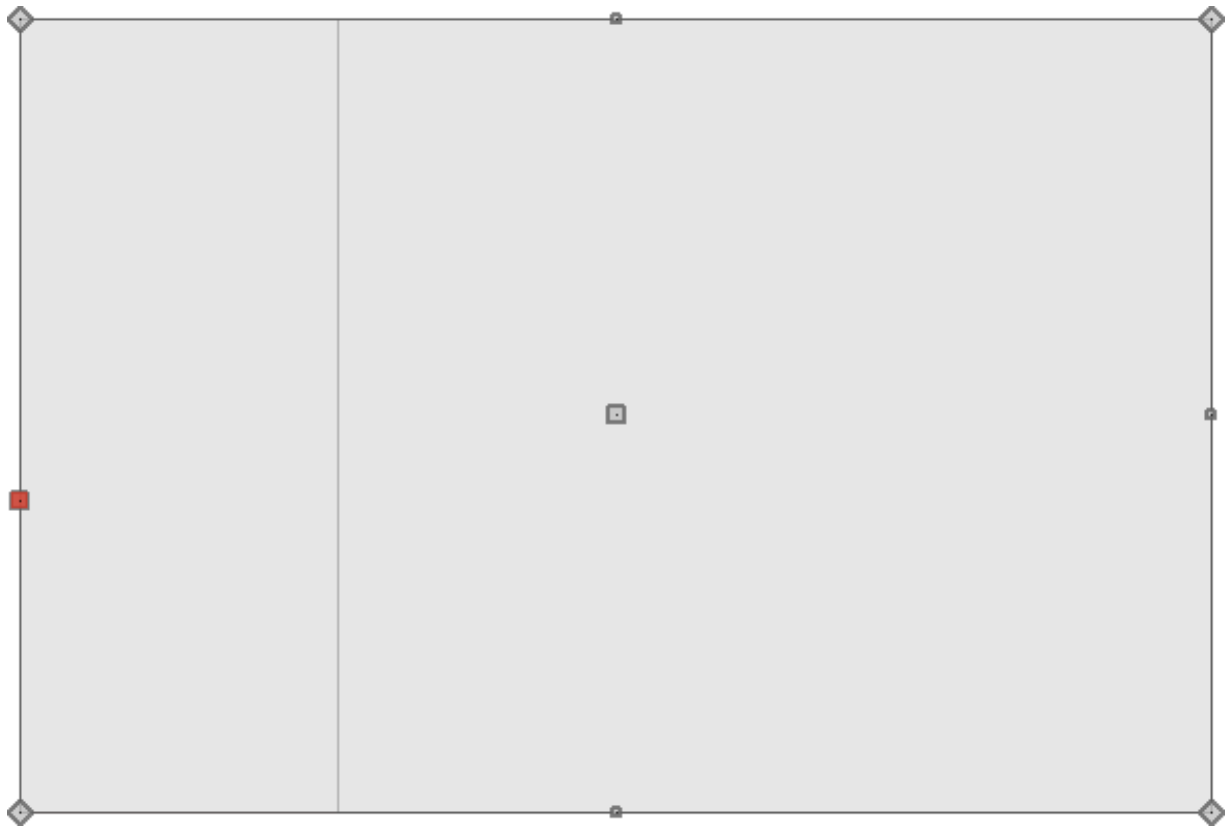


To create a rounded ledge around the pool

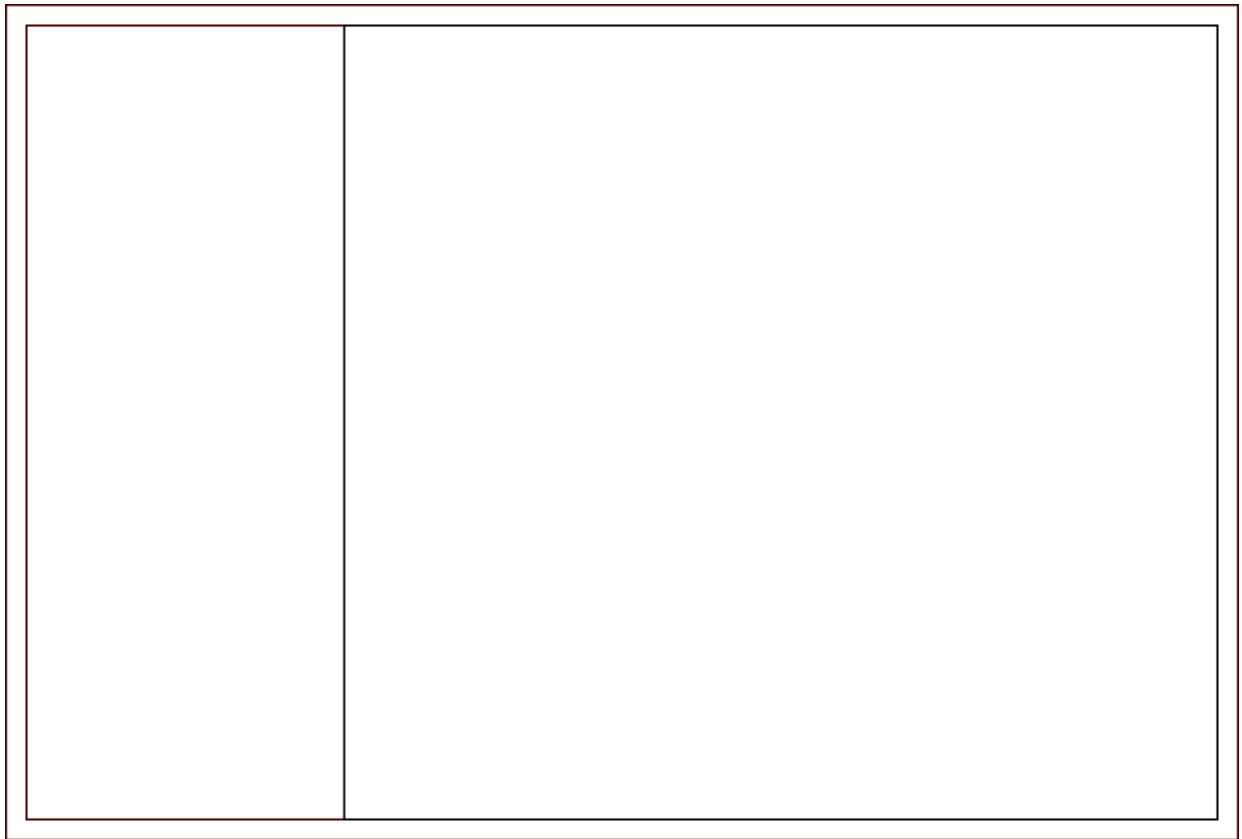
1. Select **Edit> Edit Behaviors**  and click on **Concentric** , which allows you to resize objects so that the distance moved by each edge is the same.



Note: You will notice once you have selected this option that the Concentric icon may display next to your mouse cursor until you return to the Default edit behavior.

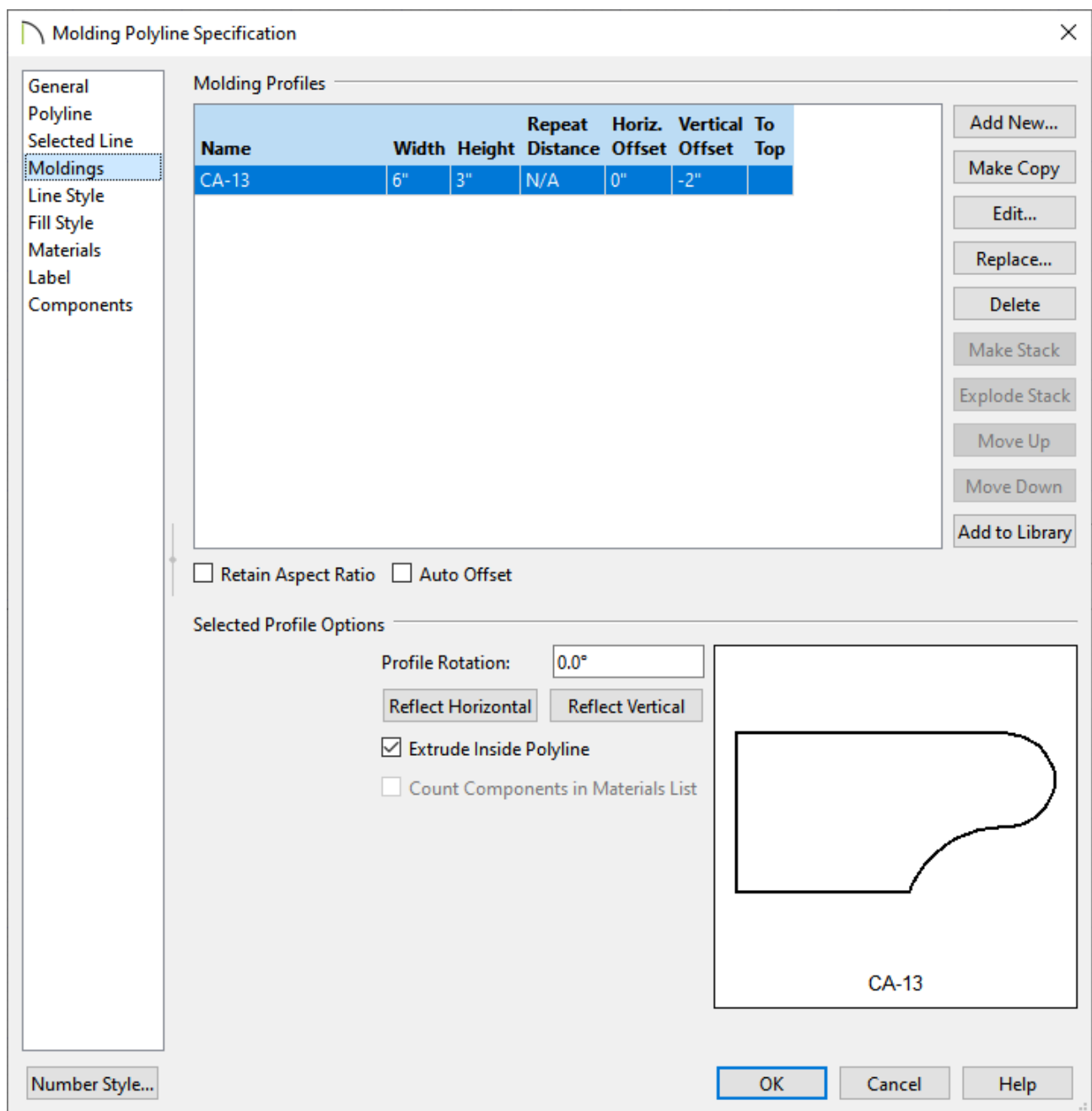
2. Using the **Select Objects**  tool, click on the pool feature region to select it, then navigate to **Edit> Copy and Paste in Place**  from the menu.



- Place the mouse pointer over one of the diamond shaped corner handles.
- Click and drag the handle slowly away from the pool. You will see that it snaps at 1 inch increments.
- Release the mouse button so that a new region is created 3 inches out from the original.



3. With the newly created feature region still selected, click the **Convert to Plain Polyline**  edit button so that it is no longer a terrain feature.
4. Next, with the new plain polyline selected, click the **Convert Polyline**  edit button, and in the **Convert Polyline** dialog that displays, choose the **Molding Polyline** option, then click **OK**.
5. On the **MOLDINGS** panel of the **Molding Polyline Specification** dialog:





- Click the **Add New** button, browse to **Chief Architect Core Catalogs> Architectural, Moldings, Profiles, Extrusions> Chair Rail**, and choose a molding profile.

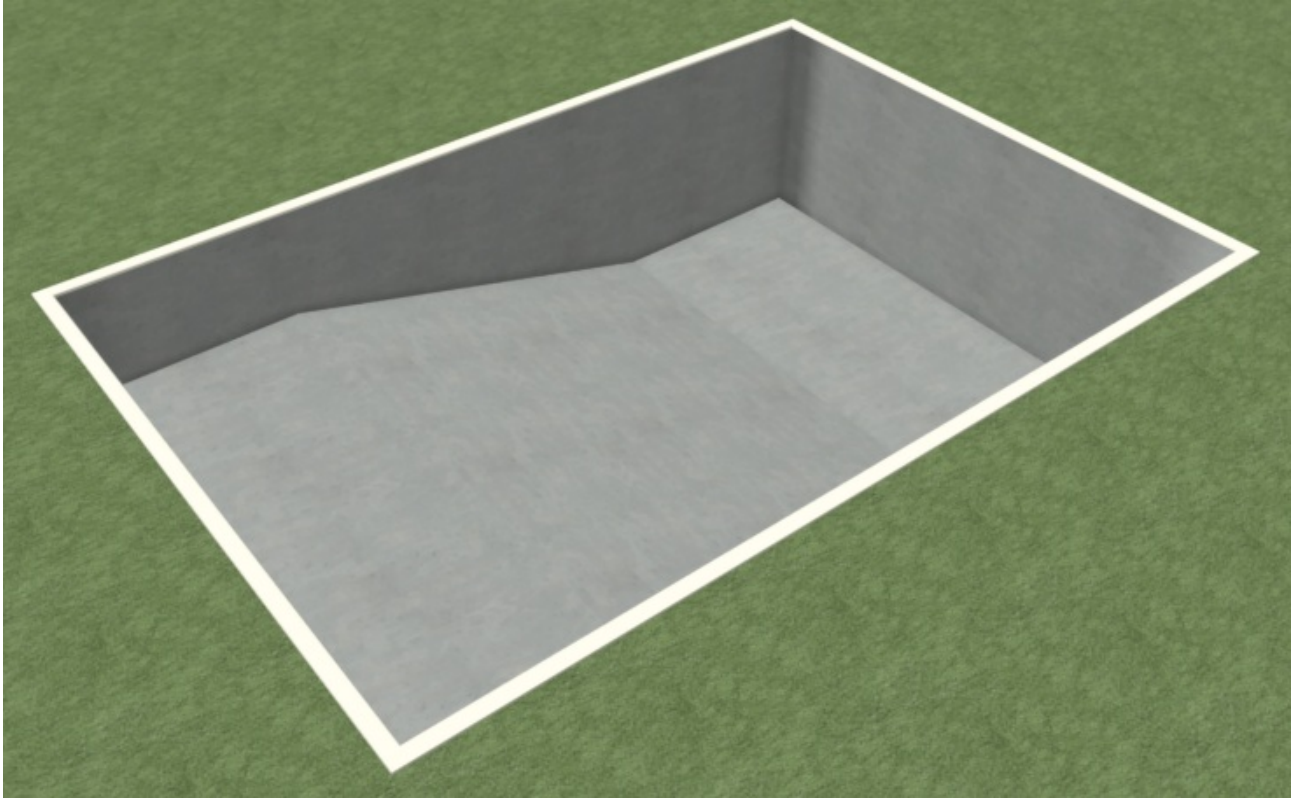
In this example, CA-13 is used.

- Set the **Height, Width**, and **Offsets** to your liking.

In this example, a Width of 6", a Height of 3", and a Vertical Offset of -2" is used.

- Make sure that the box beside **Extrude Inside Polyline** is selected.
- Make any other desired changes, then click **OK**.


- Now that we are finished using the concentric edit behavior, select **Edit> Edit Behaviors> Default**  to return to the default edit behavior.
- Take a **Perspective Full Overview**  to see the results so far.






- Once you have verified the camera view, select **File> Close View** to return to a floor plan view.

To add water to the pool

- Select the pool terrain feature created in the first section of this article.

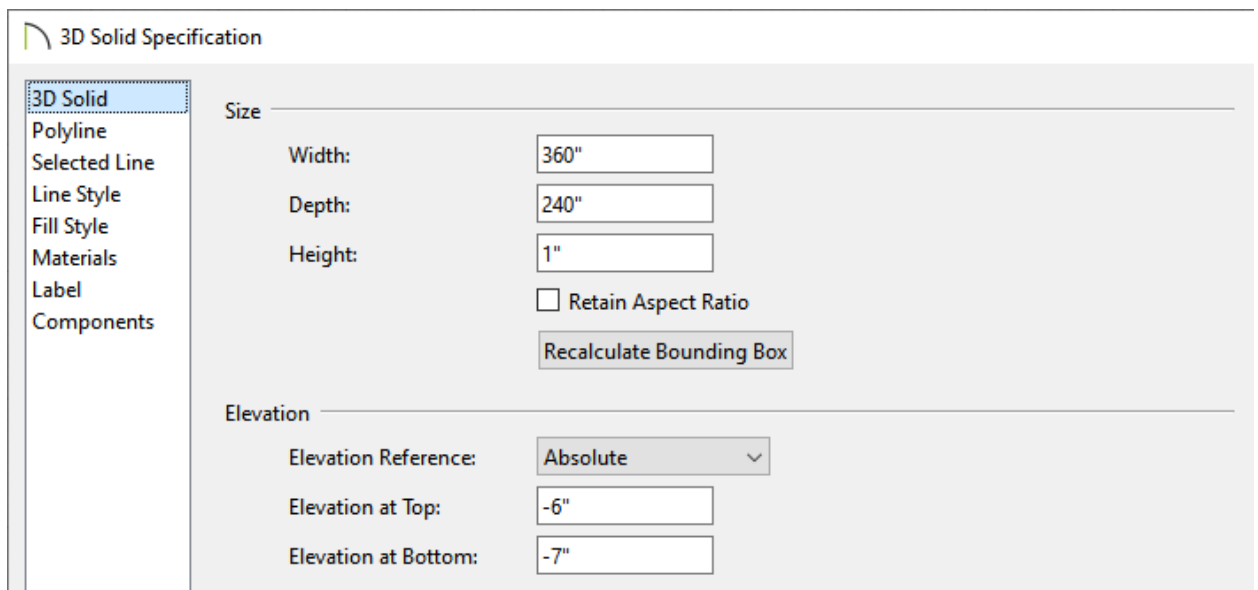
If you initially select an object other than the terrain feature, click the **Select Next Object**  button or press the **Tab** key on your keyboard.

- With the terrain feature selected, navigate to **Edit> Copy/Paste in Place**  from the menu.

3. With the pasted terrain feature still selected, click on the **Convert to Plain Polyline**  edit button.
4. With the now plain polyline selected, click the **Convert Polyline**  edit button, and in the **Convert Polyline** dialog, choose **3D Solid**, then click **OK**.

In Chief Architect X13 and prior versions, 3D Solids were called Polyline Solids.

5. In the **3D/Polyline Solid Specification** dialog that displays next:
 - On the **GENERAL** panel, set the **Height** or **Elevation** to 1", change the Elevation Reference to **Absolute**, then set the **Elevation at Top** to -6".

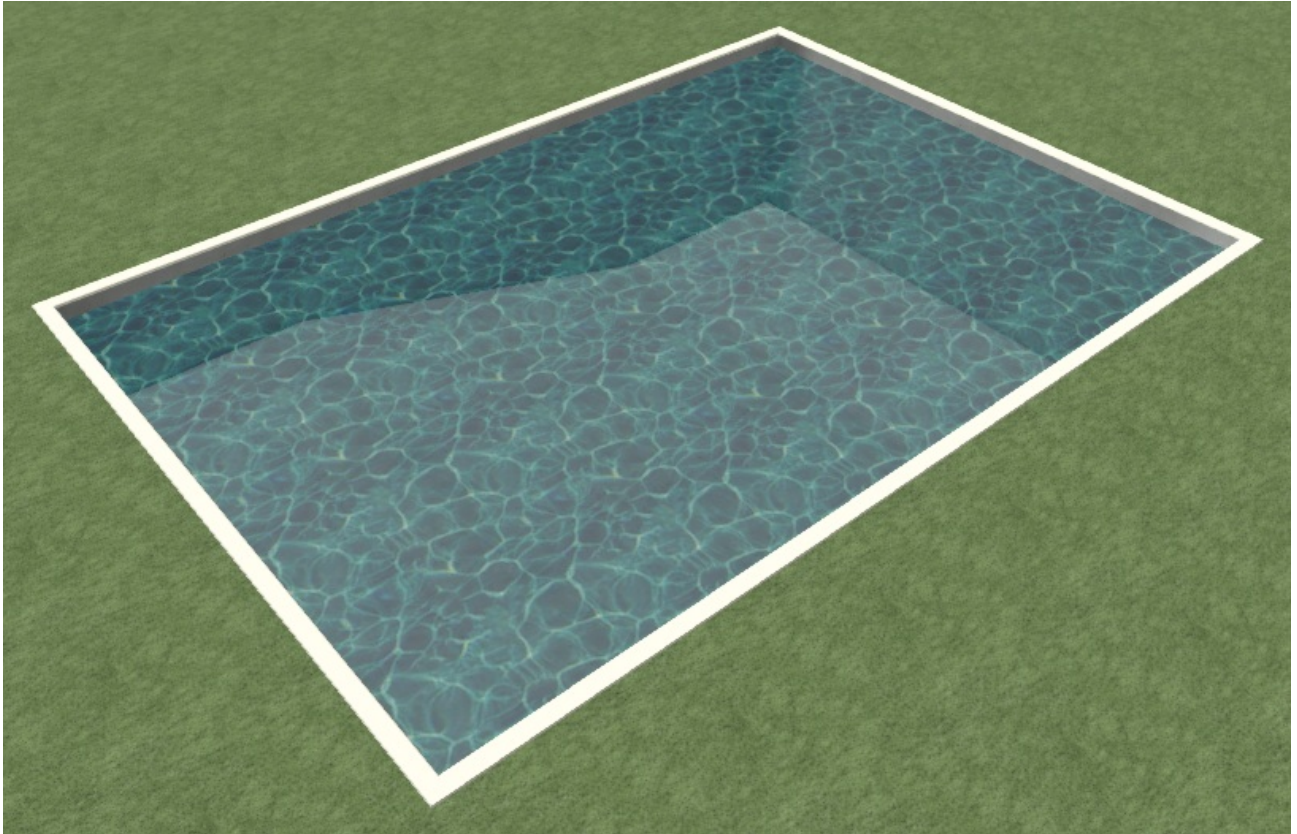


- On the **MATERIALS** panel, select the 3D/Polyline Solid component, then click on the **Select Material** button.
- In the **Select Material** dialog, browse to **Materials> Landscaping and Roadways> Water**, and choose a water material.

In this example, Water1 is used.

- Click **OK** and **OK** again to close the dialog and apply your changes.

6. Finally, take another **Perspective Full Overview**  to see the results.



To accessorize the pool area

A patio area around your pool can be designed using one or more terrain features with different heights and materials. Avoid drawing a terrain feature over the pool feature, as it will cover it up.

Suitable patio materials can be found in the Masonry & Stone and Tile folders in the Materials catalog in the Library Browser.


Furniture, games, and other accessories can also be found in the Library Browser.

Additional poolside objects and materials can be found by accessing the 3D Library (<https://www.chiefarchitect.com/3d-library/index.php?r=site/library&reset=true>).

[Creating and Editing Molding Profiles \(/support/article/KB-00166/creating-and-editing-molding-profiles.html\)](/support/article/KB-00166/creating-and-editing-molding-profiles.html)



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