

Creating a Custom Door

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Last Modified: **September 15, 2022**

The information in this article applies to:



QUESTION

Is there a way that I can create a custom door object and add it to my library in Chief Architect?




ANSWER

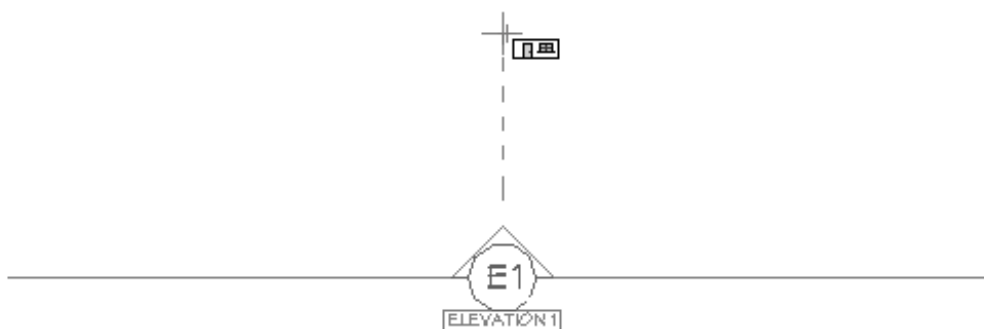
Custom objects, including doors, can be created using a combination of shapes. Once a custom door object has been defined to your liking, the Convert to Symbol tool can be utilized to create a door symbol that can take on door attributes.


In this article, we will discuss how to use CAD to create the initial shape of a custom door, followed by converting the CAD into 3D/polyline solids, adding trim, and lastly, creating the symbol.

- Forming the initial shape of the door
- Converting components to 3D/polyline solids
- Adding trim
- Creating the door symbol

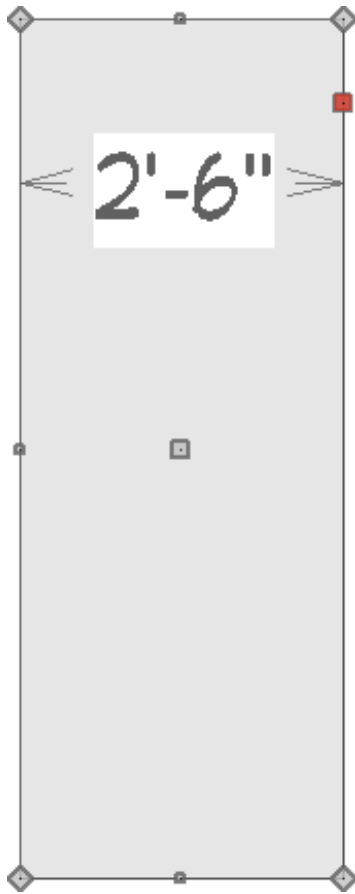
To form the initial shape of the door

1. Navigate to **File> New Plan**  to open a new plan file, select **3D> Create Orthographic View> Cross Section/Elevation**  from the menu, then click and drag to create an elevation view.




2. In the elevation view, select **CAD> Boxes> Rectangular Polyline**  from the menu, then draw a polyline that will be the size of the door.

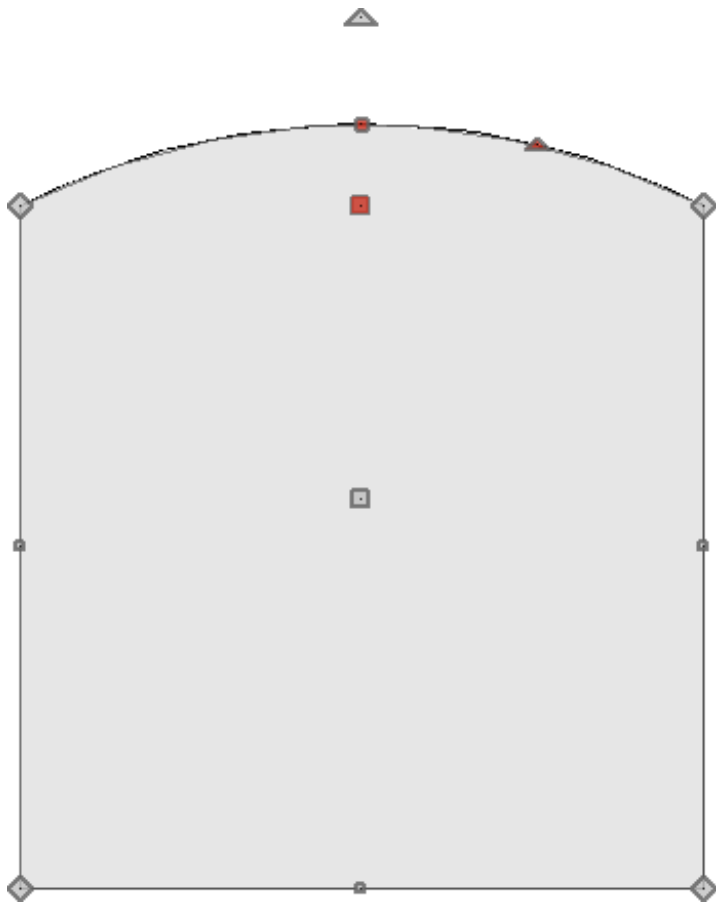
In this example, we created a polyline that's 36" wide by 80" tall.



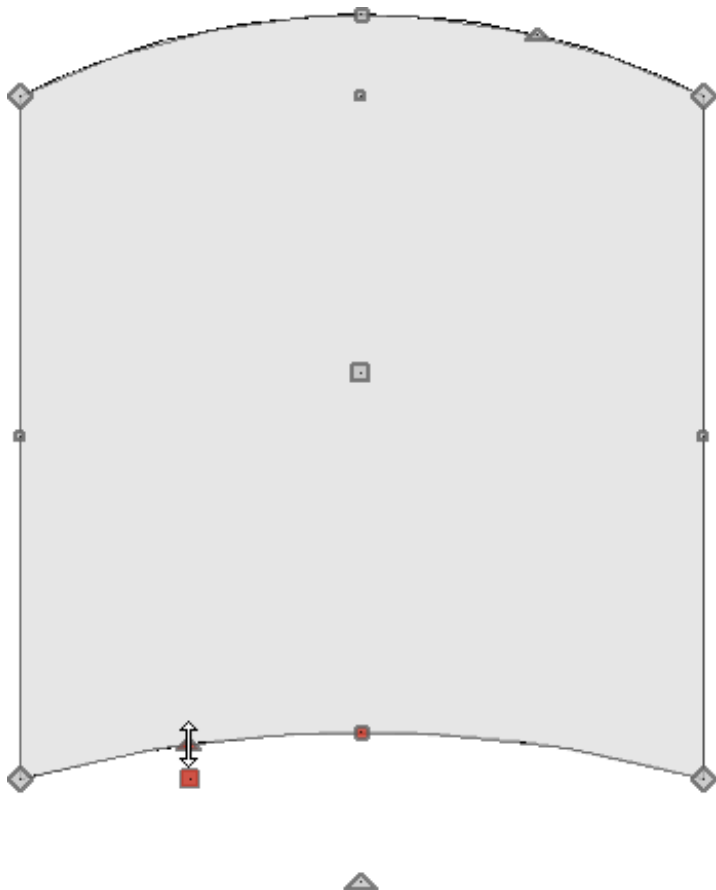
3. Create a second polyline to serve as the first door panel.

In this example, we created a polyline that's 18" wide by 18" tall.

4. Select the top edge of the polyline created in Step 3, then click the **Change Line/Arc**  edit tool.

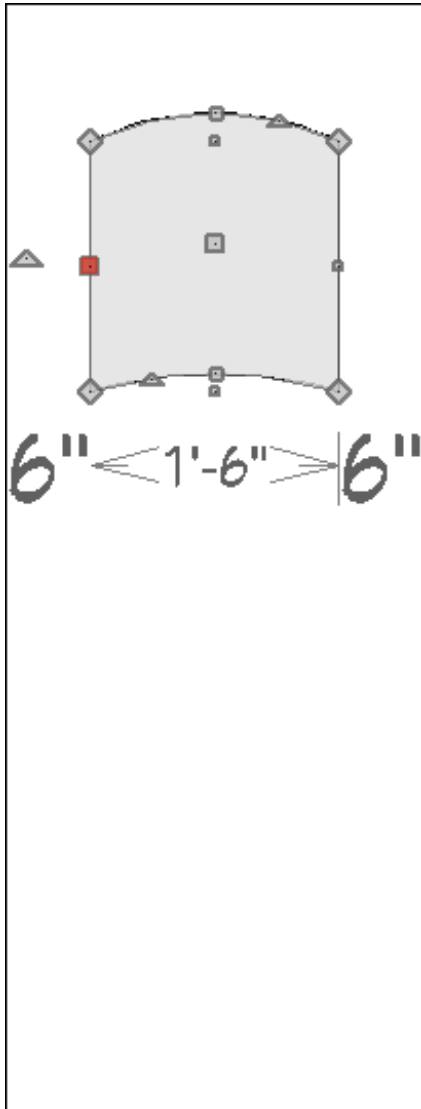




5. Repeat this process for the bottom edge, then use the small triangle edit handle to curve the arc upward, as shown below.





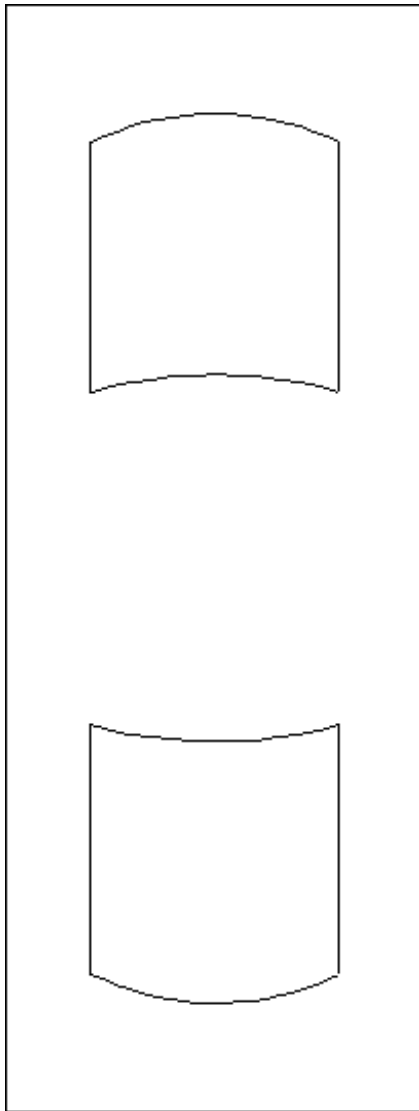
6. Move this polyline to be inside of the polyline representing the door.



In this example, the polyline representing the panel is placed roughly 7-8" down from the top edge of the door and 6" in on either side.




7. With this polyline still selected, click the **Copy/Paste**  edit tool, click the **Reflect About Object**  secondary edit tool, hover over the center of the door until you see the reflect line running horizontally, then click to place a reflected copy of the panel at the bottom of the door.

You can also create a copy of the panel, then use the **Move**  and **Rotate**  edit handles to position it into place.

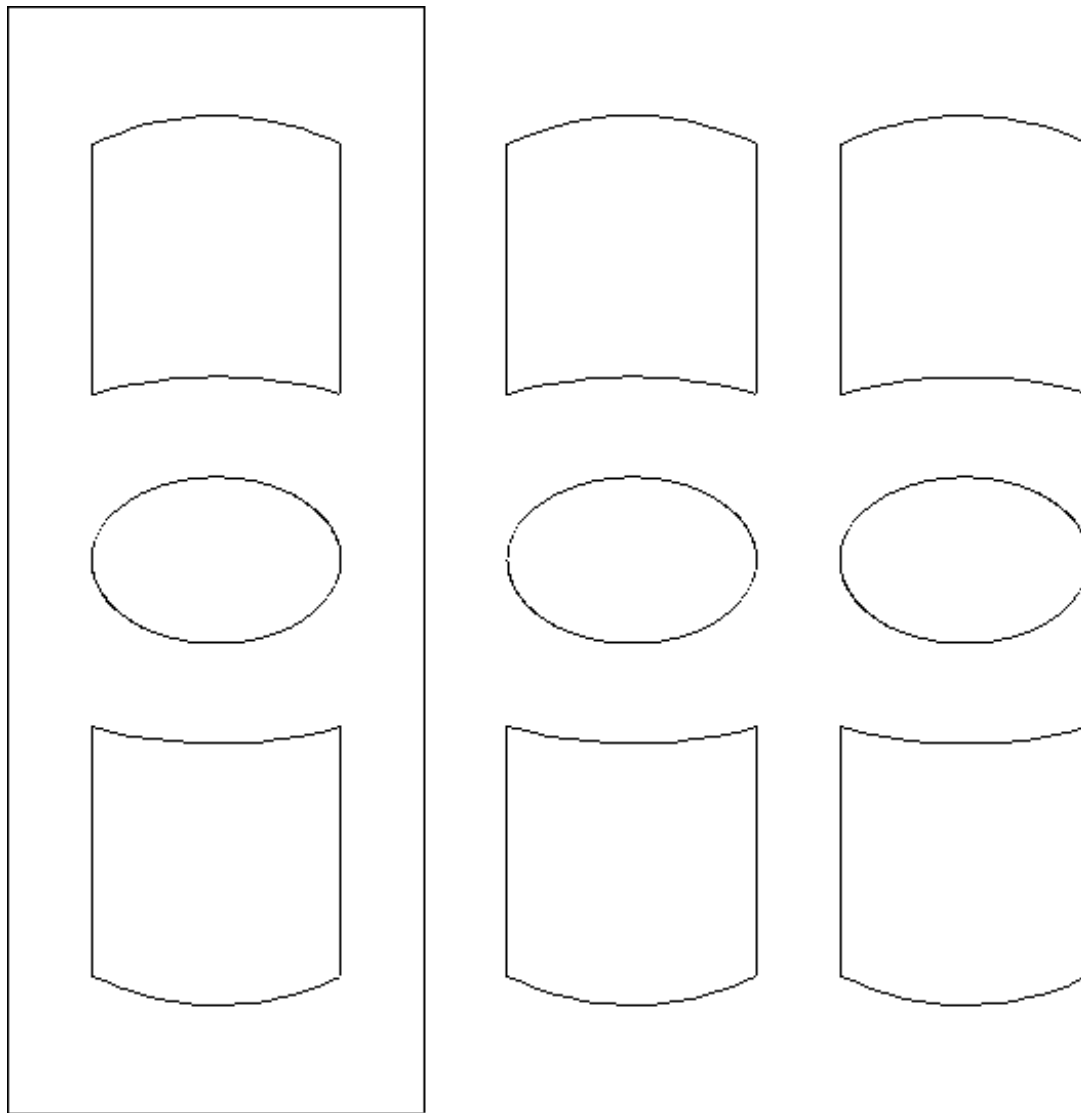


8. Next, select **CAD> Circles> Ellipse**  from the menu, draw an ellipse, then use the **Center Object**  edit tool to center it on the door.

In this example, we created an ellipse that's 18" wide by 12" tall.


9. Select the three polyline objects inside of the door and use the **Copy/Paste**  edit tool to create copies of these objects beside the door for later use.

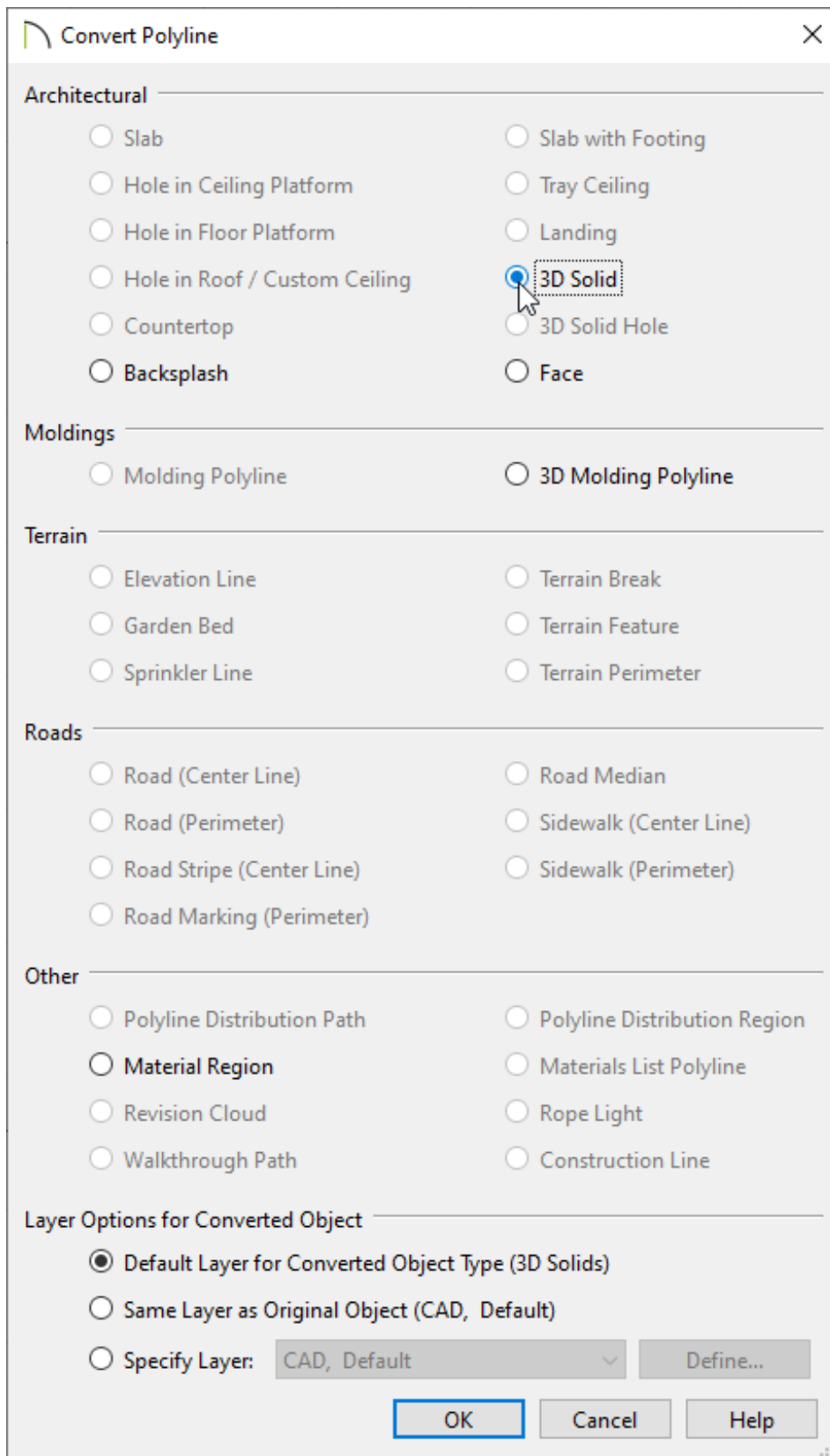
Do this twice, as shown below.



Now that we have the general layout of the door panels established, we are ready to convert the objects into polyline solids.

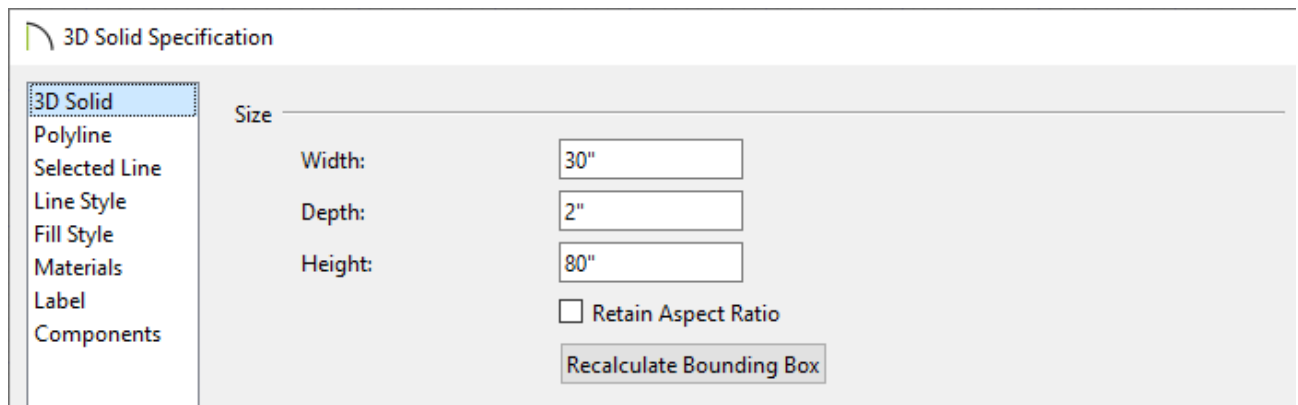
To convert the components to 3D/polyline solids


1. Select the door outline, which was the first shape created in Step 2 above, click on the **Convert Polyline**  edit tool, select the **3D/Polyline Solid** option in the dialog that appears, then click **OK**.



2. In the **3D/Polyline Solid Specification** dialog that opens next, specify an appropriate Depth or Thickness value, then click **OK**.

In this example, a Depth/Thickness of 2" is specified. This value will be the thickness of the door.



3. Select the three polyline objects that are currently contained inside the door, then click the **Convert Polyline**  edit tool.



For more information on selecting multiple objects at once, please refer to the "Group Selecting Objects" resource in the [Related Articles](#) section below.

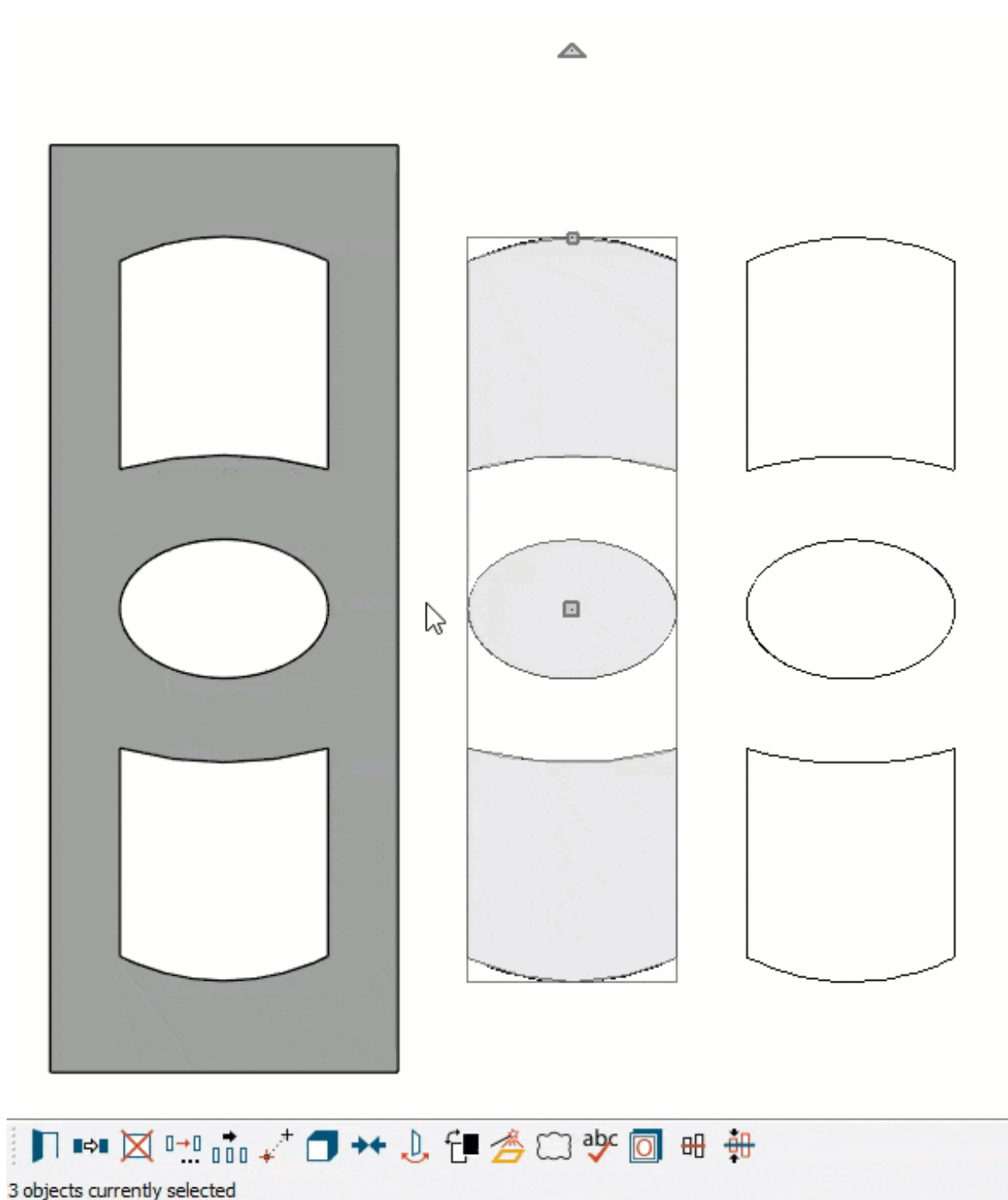
4. In the **Convert Polyline** dialog that appears, select the **3D Solid Hole** option, then click **OK**.


If you're using X13 or a prior version, select the **Polyline Solid** option instead, then click **OK**.

5. In the **3D/Polyline Solid Specification** dialog that appears next, click **OK** without making any changes if you're using X14.

If you're using X13 or a prior version, check the **Hole in Polyline Solid** box, then click **OK**.

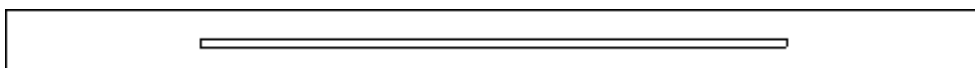
6. Now, group select the next set of three polyline objects that we copied, and using the **Point to Point Move**  edit tool or the **Move**  edit handle, align them with the newly created holes in your door.



7. With the polyline objects still selected, click the **Convert Polyline**  edit tool, convert them to 3D/polyline solids, then specify their depth/thickness.


In this example, 1/4" is specified as the thickness.

8. Return to floor plan view and center the 3D/polyline solids inside the door outline, as shown below.

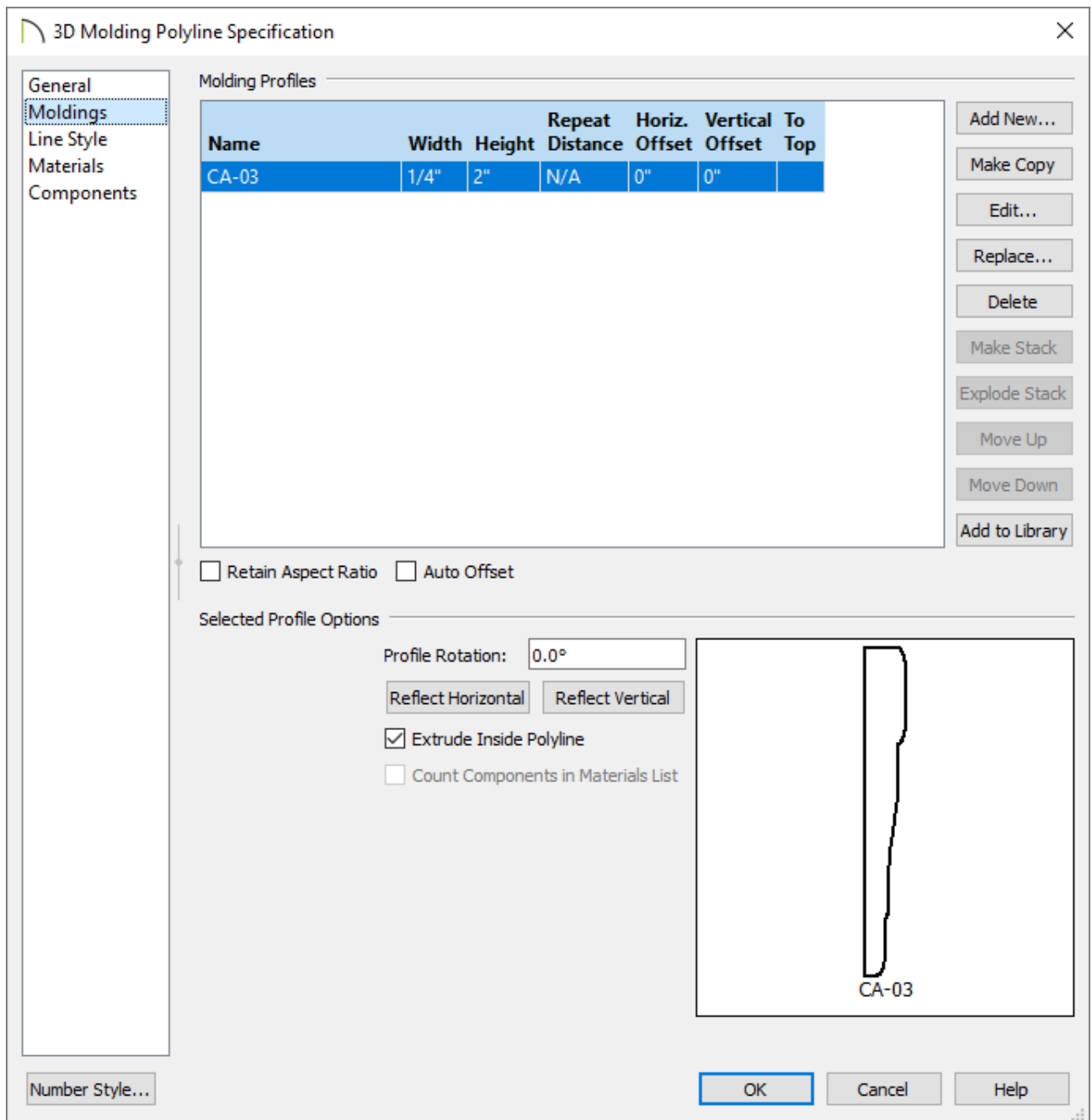




Now, we are ready to finish door by adding trim to each of the panels.

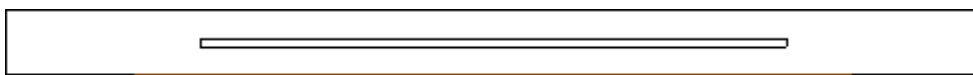
To add trim to the door panels

1. In the cross section/elevation view, select the final set of the three polyline objects that were copied in the first section of this article, click the **Convert Polyline**  edit tool, select the **3D Molding Polyline** option in the dialog that appears, then click **OK**.
2. On the **MOLDINGS** panel of the **3D Molding Polyline Specification** dialog that opens, choose your desired molding profile, set the **Width** and **Height** accordingly, then click **OK**.

In this example, the CA-03 profile was used, with the width set to 1/4" and the height set to 2".



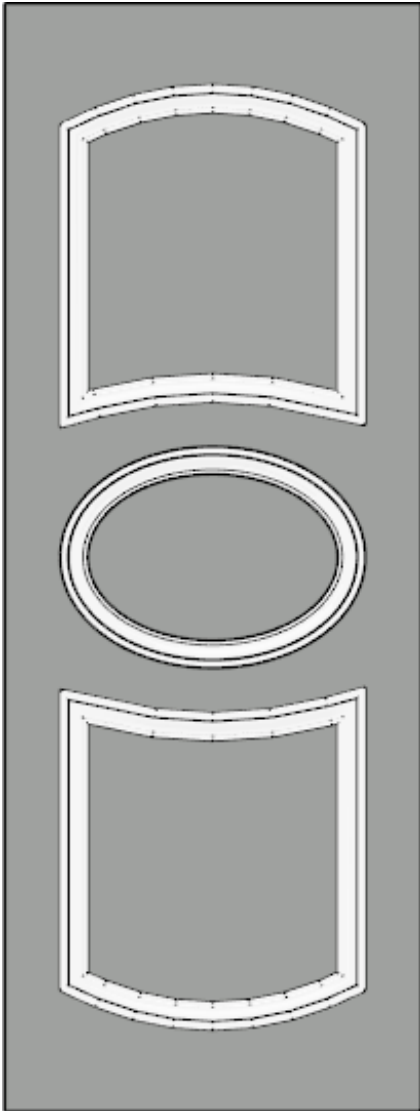
- Return to floor plan view, draw a selection marquee around the 3D molding polylines using the **Select Objects**  tool, then use the **Move**  edit handle to move the polylines so they bump up against the outer edge of the door, as shown below.






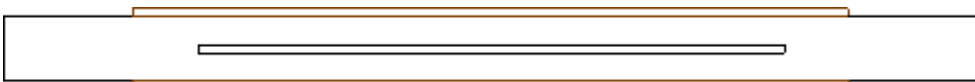
Note: If the 3D molding polylines are moved to be inside of the door, they will not be visible in a 3D or Cross Section view. If the moldings are intended to be inset into the recessed panels that were created, you will need to open the 3D molding polylines up to specification, click on the Moldings panel, and specify

a negative Vertical Offset equal to the Height of the molding profile. For this example, you would specify the Vertical Offset to be -2". You may also have to uncheck the Extrude Inside Polyline checkbox which is also located on the Moldings panel.

4. You may need to toggle between floor plan and the cross section/elevation view in order to line the objects up properly.





5. Once the 3D molding polylines are in place, use the **Copy/Paste**  edit tool in a floor plan view to replicate the trim on the other side of the door. Use the **Move**  and **Rotate**  edit handles to adjust the copied polylines so that they are positioned and oriented correctly.



Now that the door is built, we are almost ready to convert it to a symbol. But before doing so, we should assign the correct materials to the door. If all the pieces of the door object are left with their default material, you may not be able to customize the materials fully as you might wish later on.


To create the door symbol

1. Navigate to **3D> Create Perspective View> Perspective Full Overview**  to generate a camera view of the door components.
2. Select **3D> Material Painter> Material Painter**  from the menu, select a material of your choosing, then click on the door objects you'd like to apply the material to.
3. Repeat Step 2 until all of the door objects have the desired materials applied.

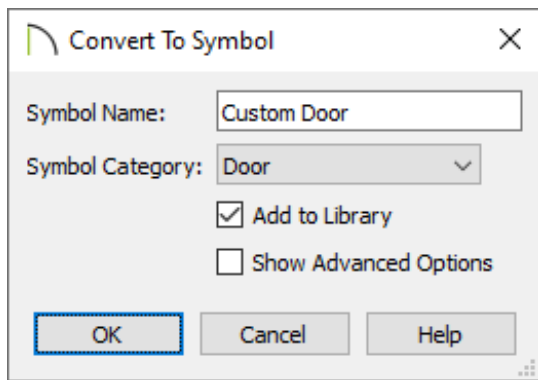
In this example, we have specified the 1/4" 3D/polyline solids that are inside of the door to be glass, and both the trim and the door are set to a white color material.



4. Staying within the camera view, select **Tools> Symbol> Convert to Symbol** 


You can also group select the door objects and click the **Convert Selected to Symbol**  edit tool.

5. In the **Convert to Symbol** dialog that displays:



- Specify a **Symbol Name** for the door.
- Using the **Symbol Category** drop-down menu, choose the **Door** option from the list.

Note: If you have created a custom cabinet door or drawer, choose the Cabinet Door/Drawer option from the list instead.

- Check **Add to Library**.
 - Click **OK**.
6. The door symbol is now located in the User Catalog section of the **Library Browser**  and is ready for use in your plans.

Once a door symbol is placed into a wall, hardware, casing, and other door attributes can be modified in the Door Specification dialog.

You can use any combination of shapes to create a variety of objects and then convert them to the appropriate category depending on your intended use of each object.

Related Articles

[📄 Converting an Object into a Symbol \(/support/article/KB-00809/convert-ing-an-object-into-a-symbol.html\)](/support/article/KB-00809/convert-ing-an-object-into-a-symbol.html)

[📄 Creating Custom Muntins \(/support/article/KB-00930/creating-custom-muntins.html\)](/support/article/KB-00930/creating-custom-muntins.html)


[Editing a Symbol's Rotation \(/support/article/KB-01021/editing-a-symbol-rotation.html\)](/support/article/KB-01021/editing-a-symbol-rotation.html)

[Group Selecting Objects \(/support/article/KB-00623/group-selecting-objects.html\)](/support/article/KB-00623/group-selecting-objects.html)

[Locating and Importing 3D Symbols \(/support/article/KB-00117/locating-and-importing-3d-symbols.html\)](/support/article/KB-00117/locating-and-importing-3d-symbols.html)



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