

Creating CAD Details

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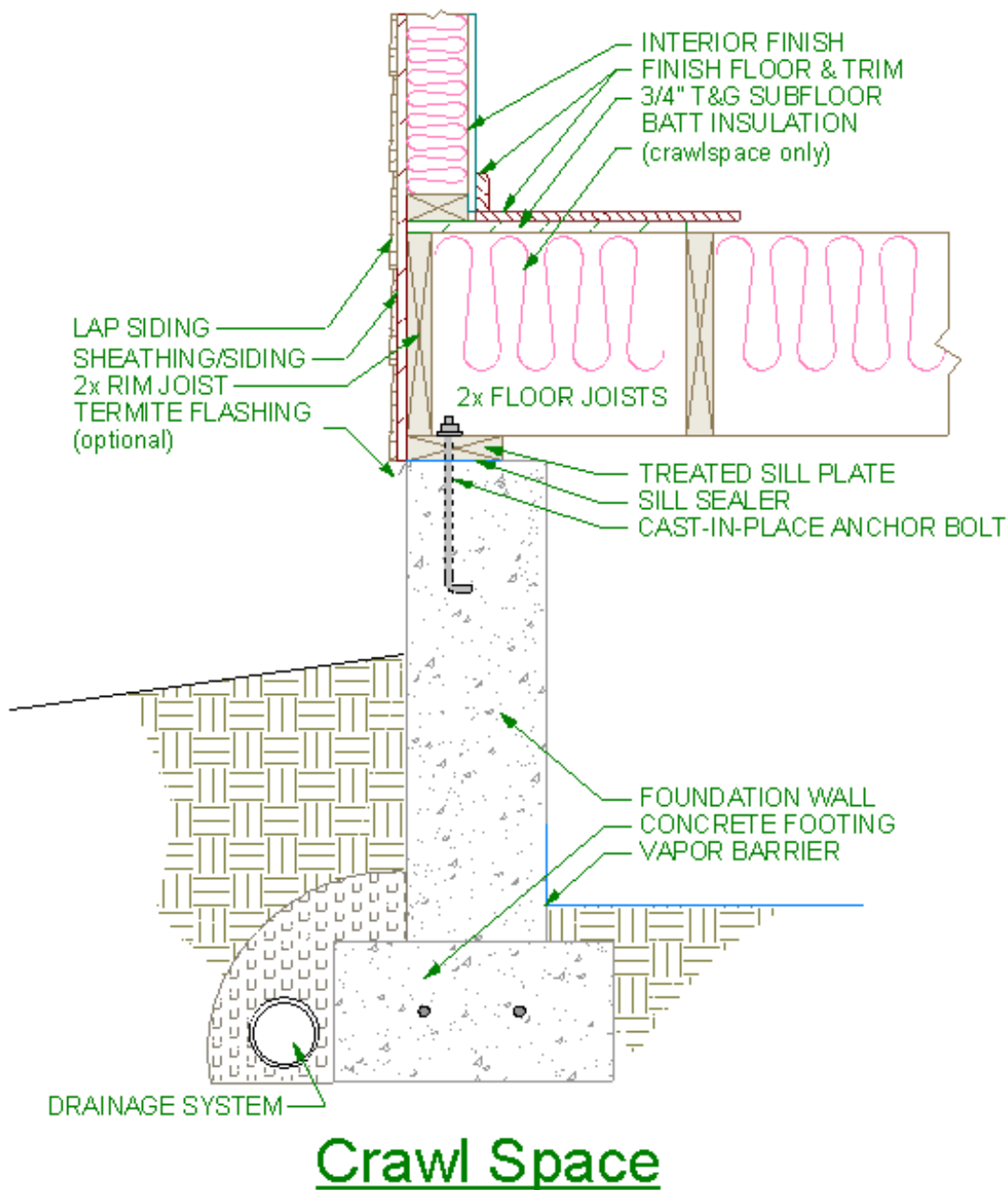
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The information in this article applies to:





QUESTION

How can I create, or find, CAD details?



ANSWER

Chief Architect provides several methods to create CAD details:

- The **Auto Detail**  tool is available in cross section/elevation views and quickly adds basic concrete, wall insulation, and siding patterns to the view, all with a single click.
- The **CAD Detail From View**  tool converts the current view into a 2D CAD drawing composed of editable CAD objects. This tool does not modify the original view the

CAD Detail was created from.

- The CAD Blocks folder located in the library includes a selection of blocked detail drawings and components that can be placed and used as they are, or edited to meet your needs.

A bonus catalog titled CAD Blocks and Details (<https://www.chiefarchitect.com/3d-library/index.php?r=site/detail/764>) is also available for download if your SSA (Support & Software Assurance) (<https://www.chiefarchitect.com/products/ssa/>) is active.

Note: For more information on downloading and importing additional libraries, please see the "Obtaining Library Content" resource in the Related Articles section below.

- Using the various CAD tools, you can create your own details from scratch.

These tools and resources can be used singly or you may choose to use a combination of them. For example, there may already be a detail located in the CAD Blocks library folder that meets your needs. Or, you may instead want to create a section view based upon your existing project, have Chief Architect auto detail it, and then add any finishing touches using the various CAD tools.



In this article, we will provide an overview of the tools and resources mentioned above, including:

- Creating cross section views
- Using the Auto Detail and CAD Detail From View tools
- Placing CAD from the library
- Drawing and editing CAD
- Accurately positioning CAD
- Adding CAD to the library

To create a cross section view


1. In a plan file, select **3D> Create Orthographic View> Cross Section/Elevation**

View  or Backclipped Cross Section .

2. With the tool selected, click and drag to create a section view. Where you click sets the location that the camera is placed, while the direction you drag determines the direction the section view will face.
3. While the section view is active, navigate to **Tools> Layer Settings> Display Options**  or access the **Active Layer Display Options**  side window, and turn layers on/off, as necessary.


To learn more about layers and how they're used in Chief Architect, please see the [Related Articles](#) section below.

To use the Auto Detail and CAD Detail From View tools

1. While in a cross section/elevation view, navigate to **CAD> Auto Detail**  to automatically generate concrete fill, wall insulation, and siding patterns for the view.

If the Auto Detail option is grayed out, it signifies you're in a view that is not compatible with the tool. For example, Auto Detail is not available for Wall Elevations.

For more information on the Auto Detail tool, please access your program's Help documentation.


2. To make further CAD modifications, it is recommended to generate a CAD detail based upon the section view. Navigate to **CAD> CAD Detail From View**  from the menu.

A CAD detail window will open and the view will now consist of editable CAD components.

Note: You can access this view at anytime by accessing the CAD Detail Management dialog, along with the CAD Details folder located in the Project Browser side window. Please see the [next section](#) in this article on accessing the CAD Detail Management dialog or see the [Related Articles](#) section for more information on using the Project Browser.

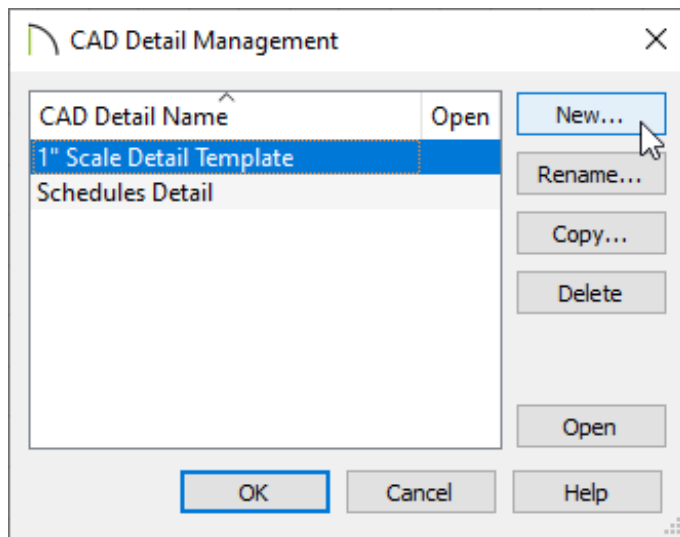
The CAD Detail From View tool can also be used to generate a CAD detail from a floor plan view or from a 3D camera view using the Vector View rendering technique.


To place CAD from the library

1. Select **CAD> CAD Detail Management**  from the menu.
2. In the **CAD Detail Management** dialog that opens, select the CAD detail you would like to modify, then click **Open**.

If you haven't created a custom CAD detail, select the **New** button, specify your desired name, then click **OK** to create a new, blank CAD detail.

Note: If you used the CAD Detail From View tool to create a CAD detail, the view will be listed here, and its name will reference the type of view it was created from.



3. With the CAD detail open, select **View> Library Browser**  to open the Library Browser side window, if it's not already open.


- In the library, browse to **Chief Architect Core Catalogs> CAD Blocks** where a selection of CAD components are available.

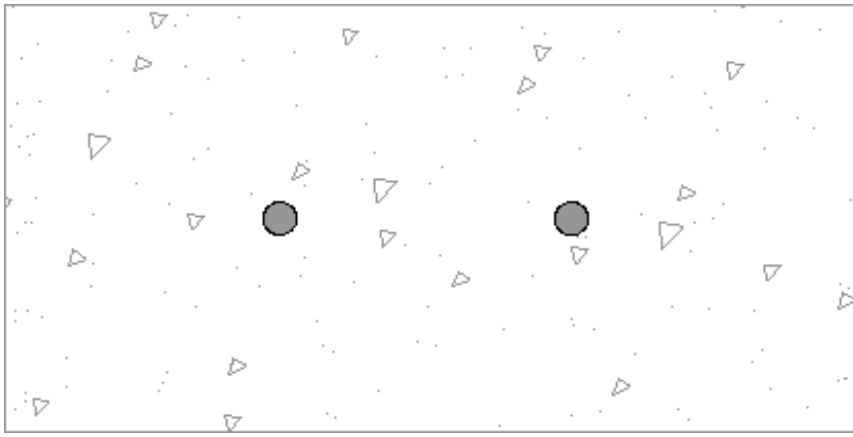
If you have downloaded the [CAD Blocks and Details](https://www.chiefarchitect.com/3d-library/index.php?r=site/detail/764)



(<https://www.chiefarchitect.com/3d-library/index.php?r=site/detail/764>) bonus catalog, you can also browse to **Chief Architect Bonus Catalogs> CAD Blocks and Details** to locate additional CAD components.


- Click on a component to select it.

In this example, the Concrete Footing is used, which is available by navigating to Chief Architect Core Catalogs> CAD Blocks> Detail Components> Footings & Slabs.


- When you move your cursor into the drawing area, it displays the CAD Block  icon. Click once to place the selected CAD block in your CAD detail window.





4. In order for this item to be in the library, it was specified as a CAD block. To edit each component related this CAD block, enable the **Select Objects**  tool, click on the footing to select it, then click the **Explode CAD Block**  edit button.

In X13, the ability to edit a CAD block in its own window was introduced. If you wish, you can edit the CAD block in a separate window using the **Edit CAD Block**  edit tool.

To learn more about editing CAD, please see the [next section](#) in this article.

5. Once you are done making modifications, group select all of the CAD objects, then click the **Make CAD Block**  edit button to block them back into a single entity.


If you're using the **Edit CAD Block**  tool in X13 and newer program versions, click **Save Active View** . You may be prompted with a Question dialog asking if you'd like to replace all instances of the block with the copy you have modified. Choose your desired option to proceed.





Note: For more information on group selecting objects, please see the appropriate resource in the [Related Articles](#) section below.





6. With the block selected, click the **Add to Library**  edit button to add the CAD block to the library for future use.

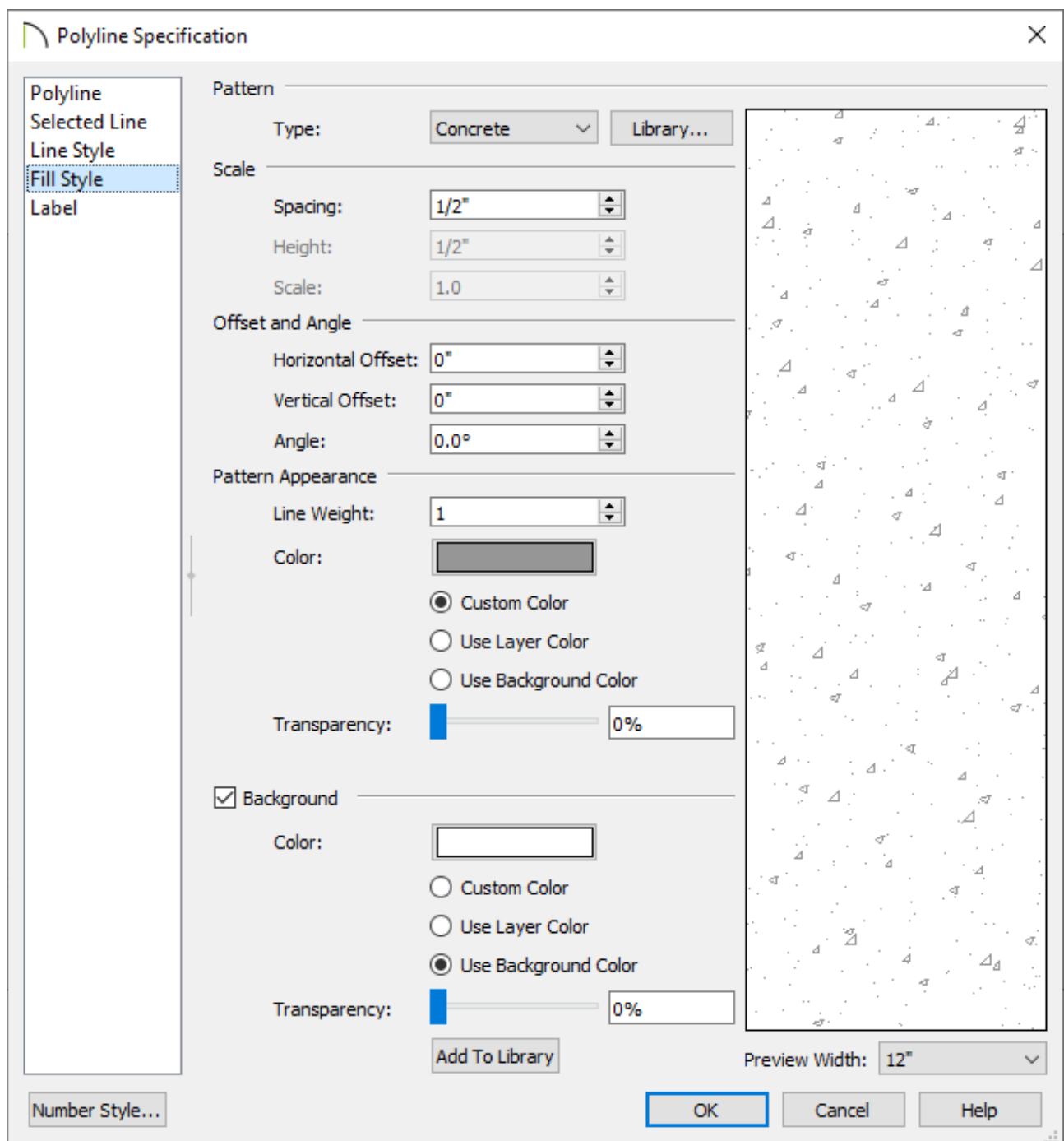
To draw and edit CAD


Depending on your requirements for a particular detail drawing, you may find that you use all of the CAD tool families: Lines, Arcs, Splines, Boxes and Circles. Two of the most common tools; Rectangular Polyline and Box, seem very similar at a glance, but are actually quite different from one another.

Rectangular Polylines  are composed of lines, just as their name implies, so each of their edges can be edited in the same way that lines can: they can be broken, trimmed, curved, deleted and so on.



Boxes  are always closed shapes with four 90 degree corners. Their corners can be filleted or chamfered but their edges cannot be extensively edited. Boxes are useful when the item being drawn needs to remain a closed shape with right angles. For this reason, the **Cross Box** , **Blocking Box** , and **Insulation**  tools are considered boxes.











1. Select **CAD> Boxes> Rectangular Polyline**  from the menu, then click and drag to create a rectangle.
 - Don't worry about the exact size or location as you draw it: instead, use **Temporary Dimensions**  to resize it precisely once it is drawn.
2. Using the **Select Objects**  tool, click on the rectangular polyline, then click the **Open Object**  edit button. In the **Polyline Specification** dialog that displays:



- On the **LINE STYLE** panel, select a **Color**, **Style**, and **Weight** for the polyline.
 - On the **FILL STYLE** panel, specify the desired Pattern **Type**, along with any other settings.
 - Click **OK** to close the dialog and apply your changes.
3. To edit the shape of a polyline or other CAD components, use the various edit tools that display in the Edit toolbar when a CAD object is selected.
- Use the **Break**  edit tool to place additional break points, giving you additional

edges that can be adjusted.

If you want to add more than one break at a time, click the **Sticky Mode**  secondary edit tool after the **Break**  tool is selected.

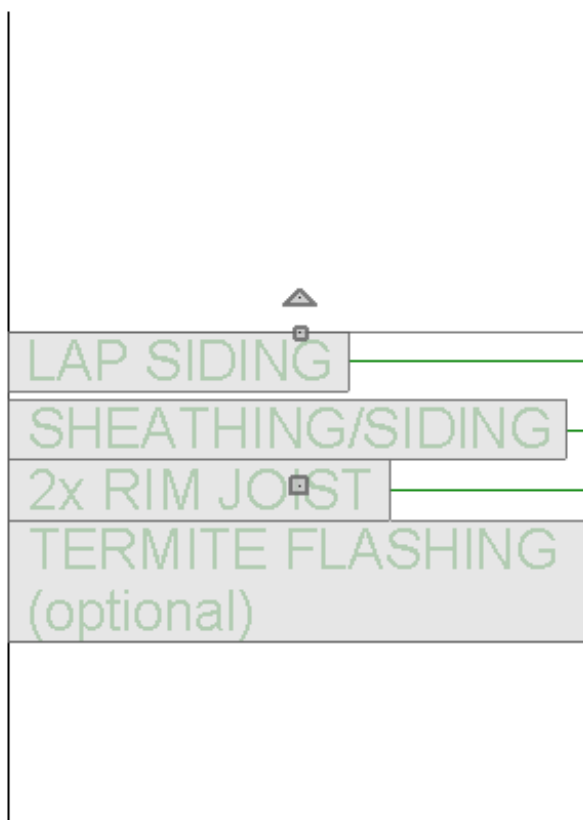
- Use the **Change Line/Arc**  edit tool to convert straight edges to curved, or vice versa.
 - Use the **Chamfer**  and/or **Fillet**  edit tools to create a chamfer or fillet effect on each corner.
 - Use the **Trim**  and **Extend Objects**  edit tools to shorten or lengthen components.
4. Circles, which are useful for representing rebar, can be created by navigating to **CAD> Circles> Circle** .
5. Select **CAD> Boxes> Cross Box** to create framing components, and **CAD> Boxes> Insulation**  to add additional sections of insulation in floors or walls, as necessary.
6. Navigate to **CAD> Lines> Draw Line**  to draw CAD lines, or open polylines. Lines work great to represent grade lines or break lines.
7. Use the **Dimensions**  and **Text**  tools to add annotations to your detail.

To accurately position CAD


In Chief Architect, there are a number of ways to position objects precisely. When preparing a detail drawing, three of the most useful techniques and tools are CAD Stops Move, Point to Point Move, and Transform/Replicate Object.

CAD Stops Move is a setting found on the **LINE STYLE** panel of the specification dialogs of Text and closed CAD objects such as circles, polylines, and boxes.

- Check this box to enable this behavior for the selected object, and it will bump against other open and closed CAD objects when it is being moved, preventing them from overlapping.
- A quick way to align text objects is to draw a line and then, after checking **CAD Stops Move** in the text object's specification dialog, move the text so that it stops against the line, which can later be deleted.



To learn how to use the **Point to Point Move**  edit tool, see the "Using the Point to Point Move Tool" resource in the [Related Articles](#) section below.

Use the **Transform/Replicate Object**  tool to copy, move, rotate, resize, and reflect objects.

1. Using the **Select Objects**  tool, click on a CAD object you'd like to modify, then click the **Transform/Replicate Object**  edit button.

This tool can also be used on objects that have been group selected. For example, if you'd like to rotate multiple objects all at once, using the Transform/Replicate Object tool may be the most efficient method.

2. In the **Transform/Replicate Object** dialog that displays:

The screenshot shows the 'Transform / Replicate Object' dialog box with the following settings:


- Copy** (checked): Number of Copies: 2
- Move** (checked):
 - ☐ Polar
 - X Delta: 16"
 - Y Delta: 0"
 - Z Delta: 0"
 - ☒ Relative To Itself
 - ☐ Absolute Location
 - ☐ Relative To Current Point
- Rotate** (unchecked):
 - Angle: 0.0°
 - ☐ Absolute Angle
 - ☒ Relative Angle
- Resize** (unchecked):
 - Resize Factor: 1.0
- Reflect** (unchecked):
 - ☒ Horizontally (Change: Left <--> Right)
 - ☐ Vertically (Change: Top <--> Bottom)
- Rotate / Resize / Reflect About**:
 - X Position: 16 7/8"
 - Y Position: -175 3/16"
 - ☒ About Object Center
 - ☐ About Absolute Point
 - ☐ About Current Point

Buttons at the bottom: Number Style..., OK, Cancel, Help.


- Check the box beside **Copy** and specify the number of copies you want to make.
- Check the box beside **Move** and specify the increments that you want the copies to be placed on the appropriate **Delta**, or axis.
- Check **Rotate** if you'd like to rotate the objects, check **Resize** to specify a Resize Factor, or check **Reflect** to mirror the object.


- Once your desired changes are made, click **OK** to close the dialog.

To add CAD to the library

1. Group select the CAD components that you would like to add to the library, then click the **Make CAD Block**  edit tool.

For more information on group selecting objects, please see the appropriate resource in the [Related Articles](#) section below.


2. Select the CAD Block, then click the **Add to Library**  edit button to add the block to your Library Browser, where you can then rename it and move it into an appropriate folder in the User Catalog.


Starting in X13, you can edit CAD blocks directly from the User Catalog. To do so, access the User Catalog, right-click on the CAD block you'd like to modify, then select **Edit CAD Block**  from the contextual menu that appears.

Note: On a Mac, hold down the Control key while clicking to initiate a right-click command. More information about right-click commands on Apple input devices can be found in the following Apple resource: [Right-click on Mac \(https://support.apple.com/guide/mac-help/right-click-mh35853/mac\)](https://support.apple.com/guide/mac-help/right-click-mh35853/mac).

Related Articles


- 📄 [Adding a CAD Object, CAD Detail, or Text to the Library \(/support/article/KB-00002/adding-a-cad-object-cad-detail-or-text-to-the-library.html\)](/support/article/KB-00002/adding-a-cad-object-cad-detail-or-text-to-the-library.html)
- 📄 [Creating a Cabinet Detail \(/support/article/KB-00580/creating-a-cabinet-detail.html\)](/support/article/KB-00580/creating-a-cabinet-detail.html)
- 📄 [Group Selecting Objects \(/support/article/KB-00623/group-selecting-objects.html\)](/support/article/KB-00623/group-selecting-objects.html)

 [Using the Point to Point Move Tool \(/support/article/KB-00734/using-the-point-to-point-move-tool.html\)](/support/article/KB-00734/using-the-point-to-point-move-tool.html)

 [Using the Project Browser \(/support/article/KB-03003/using-the-project-browser.html\)](/support/article/KB-03003/using-the-project-browser.html)



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