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# 1 INTRODUCTION

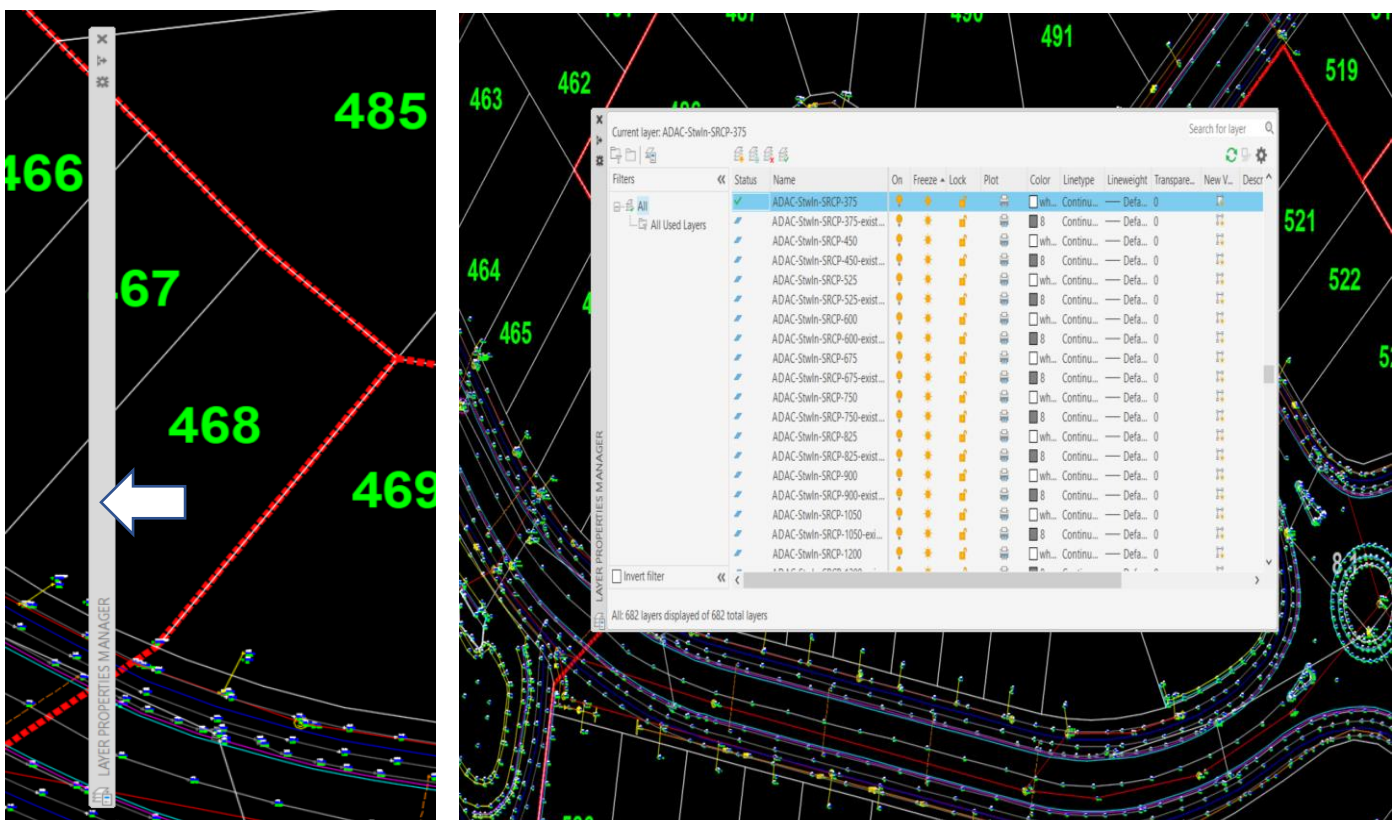
**Layers Properties Manager** is found in the **Layer** toolbar in Carlson with AutoCad, in the **Standard** toolbar for Carlson OEM or by typing 'Layer' in the command line.

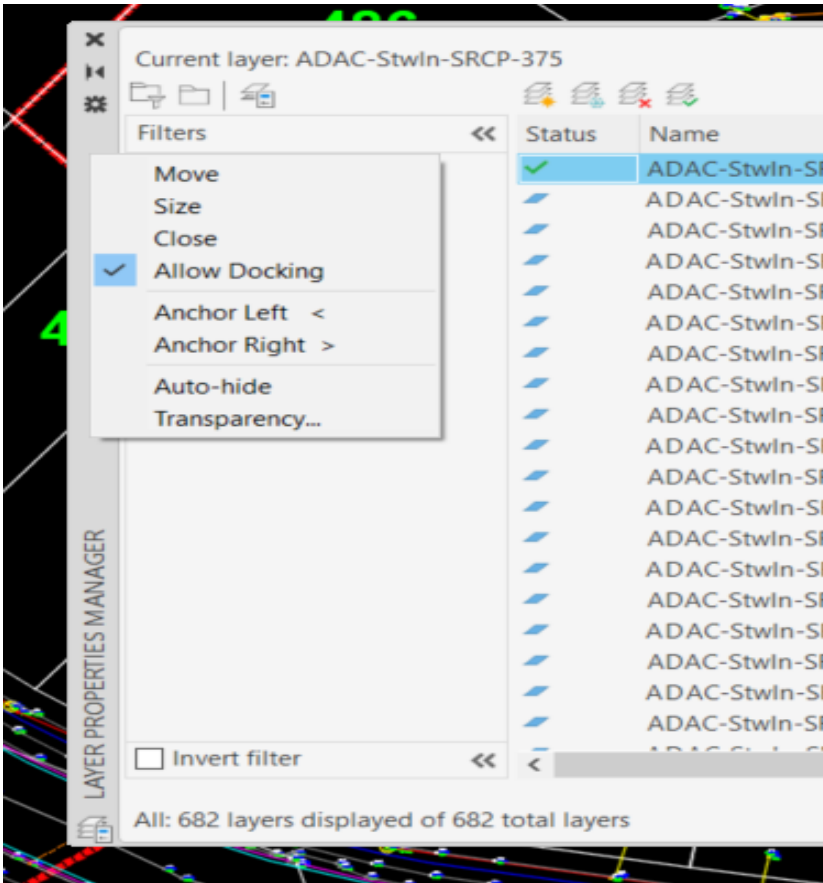
Layers are the primary method for organizing the objects in a drawing by function or purpose. Layers can reduce the visual complexity of a drawing and improve display performance by hiding information that you do not need to see at the moment.

You can add, delete, and rename layers, change their properties, set property overrides in layout viewports, and add layer descriptions.

## 1.1 Auto-hide, Transparency

There is an Auto-hide button that will automatically hide the box when not in use, the box will reopen when the cursor hovers over the strip. This option can be turned On or Off. The box can be anchored to the left or right side of the screen and the Transparency can be set





## 1.2 Layer and Layer Properties



### New Layer

Creates a layer with a default name that you can immediately change. The new layer inherits the properties of the currently selected layer in the layer list.



### New Layer Frozen VP In All Viewports

Creates a layer and freezes it in all existing layout viewports. This button is accessible from the Model tab or layout tabs.



### Delete Layer

Deletes selected layers. The following layers cannot be deleted:

- Layers 0 and Defpoints
- The current layer
- Layers used in a block definition
- Layers used in an external reference
- Layers in a partially opened drawing

**Note:** The command 'LAYDEL' will delete any layer apart from 0 and current layer but be careful about deleting layers if you are working on a drawing in a shared project or one based on a set of layer standards.



Sets the selected layer as the current layer. New objects are automatically created on the current layer.

## 1.3 Layer List

Modify the layer properties using the layer list. Click the current setting to change the layer property for the selected layer or group of layers.

**Note:** The layer list can be filtered and sorted to make it easier to find and select the layers that you want to change.










### Sort

Click a column label to sort by that column.



### Column Order

Drag a column to a new location in the list to change the column order.

#### 1.3.1 Status

-  This layer is the current layer.
-  This layer contains objects.
-  This layer does not contain any objects. This icon is controlled by the SHOWLAYERUSAGE system variable.
-  This layer contains objects, and a property override is turned on in a layout viewport.
-  This layer does not contain any objects, and a property override is turned on in a layout viewport.
-  This layer contains objects, and xref and viewport property overrides is turned on in a layout viewport.
-  This layer does not contain objects, and xref and viewport property overrides is turned on in a layout viewport.
-  This layer contains objects, and an xref property override is turned on.
-  This layer does not contain objects, and an xref property override is turned on.

### Note:

- To improve performance in drawings with a very large number of layers, all layers are indicated as containing objects, , by default. You can change this option in layer settings , or by setting the SHOWLAYERUSAGE system variable to 1.
- If the Status column is left blank, it means that the item in the layer list is a layer filter. This occurs when you choose the option to display layer filters in the layer list.

### 1.3.2 Name

Displays the name of the layer or filter. Press F2 on a layer to enter a rename.

### 1.3.3 On/Off

Turns the selected layers on and off. When a layer is on, it is visible and available for plotting. When a layer is off, it is invisible and not plotted, even if the setting in the Plot column is turned on.

### 1.3.4 Freeze/Thaw

Freezes the selected layers. You can freeze layers to improve performance and reduce regeneration time in complex drawings. Objects on frozen layers are not displayed, plotted, or regenerated.

In drawings that support 3D modeling, frozen layers are not rendered.

**Tip:** Freeze the layers that you want to remain invisible for long periods. If you plan to switch visibility settings frequently, use the On/Off setting to avoid regenerating the drawing.

### 1.3.5 Lock/Unlock

Locks and unlocks the selected layers. Objects on a locked layer cannot be modified. Objects on locked layers appear faded and a small lock icon is displayed when you hover over the object.

**Note:** Set the fade level for locked layers to see which objects are on locked layers.

### 1.3.6 Colour

Displays the Select Colour dialog box, where you can specify a colour for the selected layers.

### 1.3.7 Linetype

Displays the Select Linetype dialog box, where you can specify a linetype for the selected layers.

### 1.3.8 Lineweight

Displays the Lineweight dialog box, where you can specify a lineweight for the selected layers.

### 1.3.9 Transparency

Displays the Transparency dialog box, where you can specify a transparency for the selected layers. Valid values are from 0 to 90. The higher the value, the more transparent the objects appear. This can be especially useful for hatch, images & text.

### 1.3.10 Plot Style

Displays the Select Plot Style dialog box where you can change the plot style for the selected layers. For colour-dependent plot styles (the PSTYLEPOLICY system variable is set to 1), you cannot change the plot style associated with a layer.

### 1.3.11 Plot

Controls whether the selected layers are plotted. If you turn off plotting for a layer, the objects on that layer are still displayed. Layers that are off or frozen are not plotted, regardless of the Plot setting.

### 1.3.12 New VP Freeze

Freezes selected layers in new layout viewports. For example, freezing the DIMENSIONS layer in all new viewports restricts the display of dimensions in any newly created layout viewports but does not affect the DIMENSIONS layer in existing viewports. If you later create a viewport that requires dimensions, you can override the default setting by changing the current viewport setting.

### 1.3.13 Description

(Optional) Describes the layer or the layer filter.

### 1.3.14 VP Freeze (available only from Layout tab)

Freezes selected layers only in the current layout viewport. If a layer is already frozen or turned off in the drawing, you can't thaw the layer in the current layout viewport.

### 1.3.15 VP Colour (available only from Layout tab)

Sets an override for the colour associated with the selected layer for the current layout viewport.

### 1.3.16 VP Linetype (available only from Layout tab)

Sets an override for the linetype associated with the selected layer for the current layout viewport.

### 1.3.17 VP Lineweight (available only from Layout tab)

Sets an override for the lineweight associated with the selected layer for the current layout viewport.

### 1.3.18 VP Transparency (available only from Layout tab)

Sets an override for transparency associated with the selected layer for the current layout viewport.

### 1.3.19 VP Plot Style (available only from Layout tab)

Sets an override for the plot style associated with the selected layer for the current layout viewport. Override settings are not visible in the viewport or plotted when the visual style in the drawing is set to Conceptual or Realistic. For colour-dependent plot styles (the PSTYLEPOLICY system variable is set to 1), you cannot set a plot style override.

## 1.4 Filters Lists

Displays the list of layer filters in the drawing. Click   to expand or collapse the filter list.

When the Filters list is collapsed, use the Layer Filter button () at the bottom-left corner of the Layer Properties Manager to display a list of filters.

There are seven predefined filters:

- **All.** Lists all the layers in the current drawing.

- **All non-Xref Layers.** Lists all the layers that are not referenced from an xref drawing.
- **All Used Layers.** Lists all the layers that contain objects.
- **Xref** Lists all the layers being referenced from an xref drawing.
- **Xref Overrides** Lists all the layers being referenced from an xref drawing that have an xref layer property override.
- **Viewport Overrides.** Lists all the layers containing property overrides in the current layout viewport.
- **Unreconciled New Layers.** Lists all new unreconciled layers that were added since the drawing was last opened, saved, reloaded, or plotted. When the layer notification feature is turned on, a new layer is considered unreconciled until you accept the layer as reconciled.

### 1.4.1 New Property Filter

Displays the Layer Filter Properties dialog box, where you can create a layer filter. Layer filters limit the layers listed in the Layer Properties Manager to those with specified settings and properties. For example, you can limit the list of layers to only those that are turned on and thawed.

### 1.4.2 New group Filter

Creates a layer filter that includes only the layers that you drag to the filter.

### 1.4.3 Layer States Manager

Displays the Layer States Manager, in which you can save the current property settings for layers in a named layer state and restore those settings later.