Chief Architect® X10

Professional Design & Drafting Software

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Program Overview

The Chief Architect Viewer can be used to view and add commentary to Chief Architect drawings in either plan or layout file format, facilitating the communication process between design professionals and their clients. The Chief Architect Viewer offers many useful features:

- Open and explore plan and layout files created by Chief Architect software.

- Modify the display of the plan to see more or less detail.

- Create 3D views of the full model.

- Add notes to the drawing for review by your design professional.

- Print from any view.

- Export views as either picture files or Windows metafiles for use in other programs.

- Search for plans in a plan database.

If you would like to learn more about Chief Architect, select **Help> Visit Chief Architect Web Site** from the program menu.

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Startup Options

When the Chief Architect Viewer opens, the **Startup Options** dialog displays, allowing you to choose how you want to begin working in the program or access useful resources.

The **Startup Options** dialog can be opened at any time by selecting **File> Startup Options**.
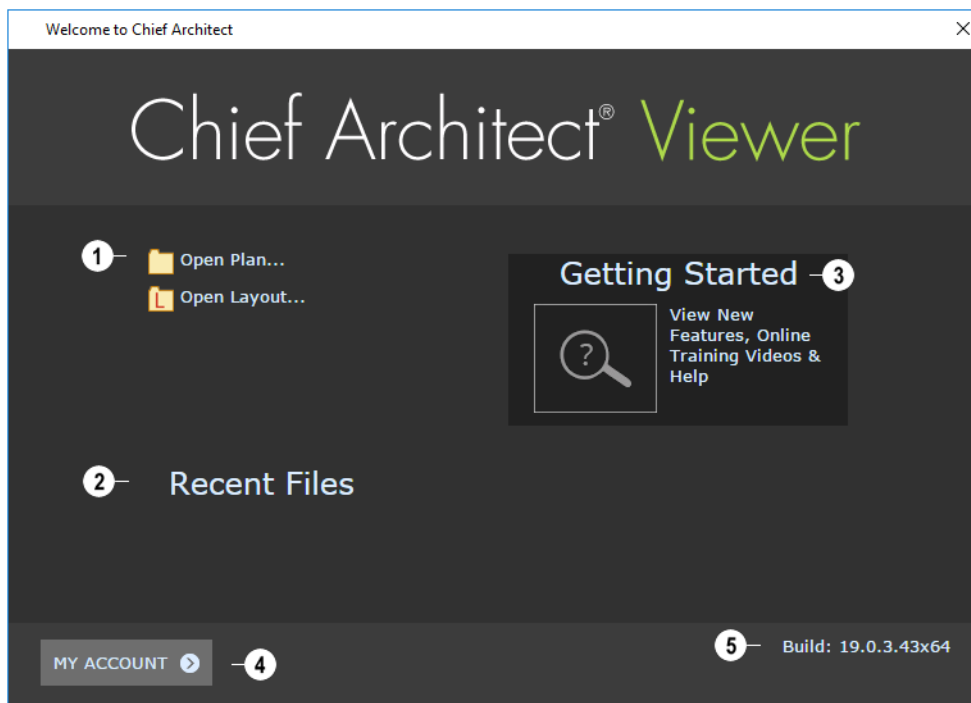
or **New Layout** Choose **Open Plan** or **Open Layout** to view a plan or layout file. See "Opening a Plan or Layout File" on page 22.

Recent Files lists the full pathnames of the most recently opened files. Click on a name to open the file.

Move your mouse pointer over a name to see the file's full pathname.

Click **Getting Started** to launch your default internet browser to the Getting Started page on our web site. There, you will find links to a variety of online resources with information about Chief Architect Premier X10.

4 When an internet connection is available, the **Announcements** section displays updated messages and news from Chief Architect.

5 Click **My Account** to launch your default internet browser to the Log In page on our web site.

6 Your software version's **Build** number displays here for reference.

The Chief Architect Viewer Environment

You can access Chief Architect Viewer's features in various ways using the mouse and keyboard.

• The program's tools are accessed using the menus and toolbar buttons.

• Keyboard shortcuts are available for most tools.

• Contextual menus display with a right-click of the mouse.

• The Status Bar at the bottom of the screen provides tool descriptions and other information about the current task.

Title Bar

Menus

Toolbar Buttons

Selected Object

Crosshair Lines

Edit Toolbar

Pointer
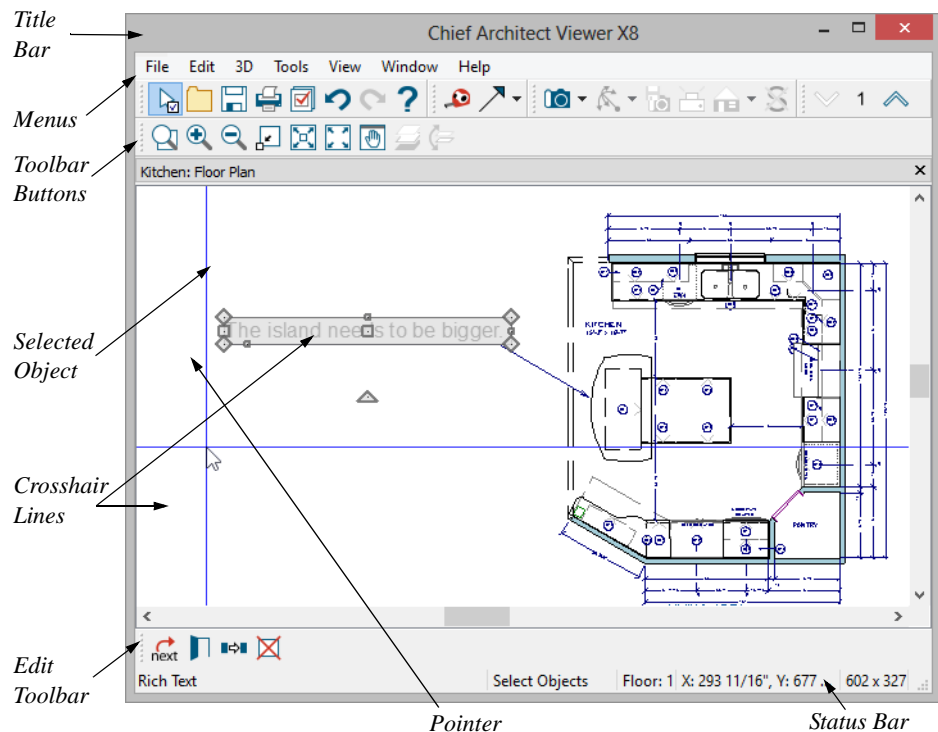
Status Bar

Using the Mouse

Most of the program is controlled using the mouse. Objects and most views are created by either clicking the left mouse button or by dragging the cursor in the direction of a desired view. The **Status Bar** at the bottom of the Chief Architect Viewer's main window indicates which tool is active.

The **left button** is the primary button used in the Chief Architect Viewer. Unless specified otherwise, Chief Architect Viewer documentation refers to the left mouse button.

> Note: If you are left-handed and have re-programmed your mouse, reverse the instructions for left and right buttons in this manual.

The **Right button** has several uses.

Right-click to select any object.If, for example, the **Full Camera** tool is active, the left mouse button only allows you to click and drag to create camera views. You can select other object types such as text with the right mouse button.

You can also use the right mouse button to open a context sensitive menu with additional editing commands. See "Contextual Menus" on page 13.

The **Middle button** can be used to pan in most view types. To close a tabbed view window, click on its tab using the middle mouse button. You can also program it to work as a double-click.

If your mouse does not have a middle mouse button, in the Mac version of Chief Architect Viewer you can use the left button and the Command key to achieve the same results.

The **Mouse Wheel** can be used to zoom in and out in most view types. See "Zoom Tools" on page 37.

3D Mice

3Dconnexion®'s 3D mice can be used to navigate in Chief Architect Viewer. For information about navigating in camera views and overviews, see "3Dconnexion® 3D Mice" on page 56.

Using a Trackpad

In addition to the standard trackpad gestures on your system, in Chief Architect Viewer you can pinch to zoom.

In macOS™, you can Command + click to pan. Panning is not supported in the Windows version of the software, however.

Touch Screens

Standard one-finger touch screen gestures are supported in both the Windows and Mac versions of the software. In the Windows version, touching with a second finger to cancel an action is also supported, as are two-finger pan and two-finger pinch to zoom.

Edit Handles

When you select an object, its edit handles display.

When you pass the mouse over an edit handle, information about what the handle does displays in the Status Bar and the pointer changes to show how you can use that handle.

- A two-headed arrow indicates that the object, corner or edge can be moved in the direction of the arrows.
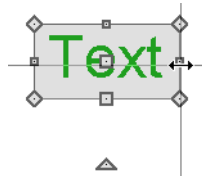
- A four-headed arrow indicates that the selected object or edge may be moved in multiple directions.

- A circular arrow indicates that the selected object can be rotated.

Resize handles display along the edges of the object are used to change the size.

The Move handle at the object's center lets you move the object. Depending on the type of object(s) selected and how far you are zoomed in or out, the position of the Move handle may shift so that it remains on-screen.
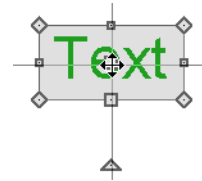
The triangular Rotate handle lets you rotate the object.
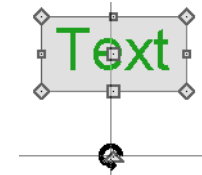
You can cancel any edit handle operation before it is completed by pressing the Esc key on your keyboard or by pressing any two mouse buttons at the same time.

The edit handles that display depend on the type of object selected, the current view, and how far you are zoomed out.

Edit handles do not resize as you zoom in or out. If you are zoomed out far enough, some edit handles may be hidden so that they do not stack over one another. As you zoom in, these handles become visible again.

View Windows

View windows are sometimes referred to as "the drawing area" because most of them are windows in which you can draw or place architectural and/or CAD objects. There are a number of different types of view windows in the Chief Architect Viewer:

- Plan views
- Camera views and overviews
- Cross section/e

View windows can be navigated by panning and zooming. You can also enable scroll bars on their right side and bottom. Select **View>**

Scrollbars 🔲 to toggle their display. See "View Tools" on page 37.

Although only one view window can be active at any given time, there is no limit to the number of view windows that can be open. View windows can be tiled or tabbed, and you can navigate between them in a

number of different ways. See "Window and View Tools" on page 33.

You can also tear a view window out of the main program window. This creates a second, separate program window complete with toolbars and menus. Individual view windows can be torn out and transferred between program windows.

Toolbars and Hotkeys

The Chief Architect Viewer installs with a set of toolbars docked to the top, right side and bottom of the program window. Using the toolbar buttons is the fastest, easiest way to access many program features. If a tool is active, a small checkmark will display at the lower left of its button icon. When you pass the pointer over a toolbar button, a "tool tip" displays the name of the tool and a more detailed description displays in the Status Bar at the bottom of the program window. When you see one of these tool tips, press the F1 key to get more information about that item. See "Getting Help" on page 18.

Click on the arrow to the right of a button to display a drop-down list of related tools. For example, click the arrow to the right of the

Full Camera 📷 button to display a drop-down list of the other 3D View Tools.
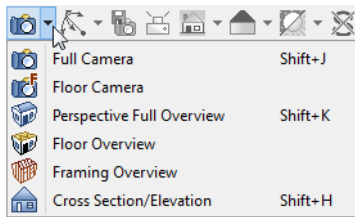
You can, if you wish, move any toolbar to a different location. Toolbars can be docked to any side of the program window, or they can be undocked and left floating. Undocked toolbars can also be moved outside of the program window.

Toolbar locations are saved between program sessions.

The Edit Toolbar

When you select an object, the edit toolbar appears. By default, it is located at the bottom of the program window, just above the Status Bar. The buttons on the edit toolbar can be used to edit the selected object(s). Which buttons display depends on the type of object selected, the current view, and how you selected the object.
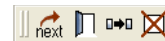
The edit toolbar buttons are the same as the options in the contextual menu when you right-click on an object. See "Contextual Menus" on page 13.

Hotkeys

Many commands can be invoked from the keyboard. Press Alt on your keyboard and press the underlined letter in a menu name to access that menu, as well as items in the menus and submenus.

Other keys or key combinations will invoke a variety of program commands. If a Chief Architect Viewer menu item has a keyboard shortcut, or hotkey, associated with it, that hotkey will display to the right of its name in the menu.

Menus

The Chief Architect Viewer uses a standard Windows menu format. The menus are located below the title bar in the program window and can be used to access nearly all tools in the program. Click on a menu name to expand it, then click on a menu item to either activate that tool or access the item's submenu. Items with a submenu have an arrow to the right of the name.

Menu items with an icon to their left have a toolbar button associated with them.

The menus can be accessed using the keyboard. Press the Alt key once to enable this functionality - one letter in each menu will become underlined. Press the key associated with one of these underlined letters to expand its menu - one letter in each menu item's name will be underlined. Press the key associated with one of these letters to activate that tool or access the item's submenu. Press the Esc key to undo your last selection, or click with the mouse to exit out of this functionality.

Many tools in the Chief Architect Viewer also have hotkeys associated with them. If a menu item has a hotkey, it will display to the right of the item's name.

Edit menu items with button icons to the left and hotkeys to the right

In the Chief Architect Viewer documentation, menu paths are written in this format: **Tools> Layout Page> Up Page** .

Contextual Menus

Contextual menus are context-sensitive menus that display tools relevant to a selected object or view. To open a contextual menu, right-click on an object, in an empty space in a view window, or in a text field in a dialog box.

The options in an object's contextual menu are usually the same as those on an object's Edit toolbar. See "The Edit Toolbar" on page 12.

Dialogs

Many functions in the Chief Architect Viewer are accessed through dialog boxes.

Dialog panels and settings can be accessed using the mouse. You can also navigate the settings on a given dialog panel using the keyboard. For example:

- Line items in tree lists can be browsed using the arrow keys. Up and Down navigate the list, while Left and Right expand and contract categories.

- Press the Tab key to shift focus from the tree list to the first setting on the selected panel.

- Press the Tab key to shift focus from one setting to the next, or Shift + Tab to go in the reverse direction.

- A check box can be checked or cleared by pressing the Spacebar or the + or - keys, respectively, while it is in focus.

- Columns of radio buttons can be navigated using the Up and Down arrow keys; rows can be navigated using the Left and Right arrows. Select a radio button by pressing the Spacebar while it is in focus.

- Settings in list boxes can be navigated using the Up and Down arrow keys. When a checkbox is in focus, it can be checked or cleared by pressing the Spacebar.

- Drop-down lists can be browsed using the Up and Down arrow keys. When the mouse pointer is directly over the drop-down, the mouse scroll wheel can also be used; on a Mac, the list must also be expanded. In Windows only, you can press Tab to select the highlighted item in the list and proceed to the next setting.

- Settings with spin control arrows ⬍ can be adjusted by typing in the text field or using the Up and Down arrow keys. When the mouse pointer is directly over the setting, the mouse scroll wheel can also be used.

- Slider bars ⬇ can be adjusted by typing in the text field or using the Left and Right arrow keys. When the mouse pointer is directly over the slider bar, the mouse scroll wheel can also be used.

- Line items in tables can be group selected using the Ctrl or Shift keys, or by pressing Ctrl+A.

- Press Enter on your keyboard to close most dialogs and apply your changes.

> Note: Keyboard navigation in dialogs may vary somewhat depending on your computer platform.

In the Mac version of the software, Dictation is supported in dialogs. Select **Edit> Start Dictation**, then open a dialog. Say the word "Numeral" before a number to enter it as a numeric value or immediately follow a number with a unit such as "foot" to enter it as a measurement.

Specification Dialogs

Each object that you can draw in the Chief Architect Viewer has a unique specification dialog where you can enter size, style and other information specific to

the selected object. To access it, select the object and click the **Open Object** edit button.

You can also double-click on an object with the **Select Objects** ⏷ tool active to open its specification dialog.

The Status Bar

The Status Bar at the bottom of the main program window displays information about the current state of the program.

This information depends on a variety of conditions such as the type of object selected, and the current position of the pointer. The information may include the following:

*   The type of object currently selected or the total number of group-selected objects.

*   A description of the edit handle that the pointer is over.

*   A brief description of the toolbar button or menu item highlighted by the mouse.

*   The name of the active tool and its hot-key, if it has one.

*   The length and/or angle of an object as it is being drawn.

*   Basic information about a selected library object, folder, or catalog.

*   The current floor.

*   The layer that the selected object is on.

*   The size of the active window in pixels.

Message Boxes

As you work in the Chief Architect Viewer, the program will occasionally prompt you to examine your settings, alert you if you command it to do something that could potentially cause a problem, or notify you if it encounters a problem that needs your attention.

Situations where such message boxes may display include:

*   Closing a file or view without saving;

*   A file referenced outside the program, such as an image or texture, is missing.

As with dialog boxes, you can access the options in a message box using the mouse or navigate them using the keyboard.

A few messages have a **Send Report** button. Click this button to send details regarding the issue that prompted the message to Chief Architect via the internet.

Some message boxes include a "Remember my choice" or a "Do not show this again" checkbox. Check this box to prevent messages of this specific type from displaying in the future. When this box is checked, some options in the message box may become inactive.

Viewing a Plan

You can see a model in a variety of different 2D and 3D views. You can display more than one view at a time; and in any view, you can pan or zoom in or out. See "Window and View Tools" on page 33.

Floor plan view is a 2D view of the model. Each floor displays separately; however, you can control which objects display at any given time, can easily switch between floors, and can also display items on a second floor for reference. See "Multiple Floors" on page 29.
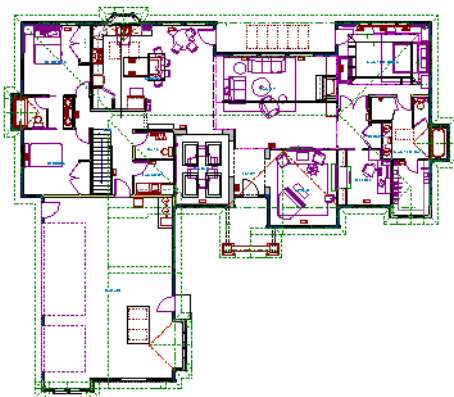
You can create interior and exterior 3D views of a model from any perspective. As in floor plan view, you can control which objects are visible. See "3D Views" on page 47.

All views can be exported as a graphic image. See "To export a picture" on page 86.

Layout Files

Layout files are used to produce printed construction documents by displaying multiple views of the model in combination with a variety of written information on multiple sheets. Only one layout file can be open at a time. See "Working in Multiple Views" on page 34.

To open a layout file, select **File> Open Layout** ⬜. Browse to a directory and select the layout file to open. See "Opening a Plan or Layout File" on page 22.

The current page is indicated at the center of the Layout Page ⌄ 1 ⌃ buttons.

To navigate between layout pages

• Click the arrow buttons on either side of the **Layout Page** ⌄ 1 ⌃ button.

• Click the **Current Page** number between the arrows to open the **Go To Layout Page** dialog. Enter a page number and click **OK**.
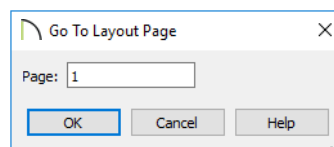
• Select **Page Up** or **Page Down** from the **Tools> Layout>** menu.

• Press Shift + N (up one page) or Shift + M (down one page) on the keyboard.

Tape Measure

Use the **Tape Measure** tool to draw a temporary dimension line between any two points in the drawing area. The tool will place temporary markers at the start and end points of the dimension line. These points and the line both disappear when you release the mouse button. If an object is
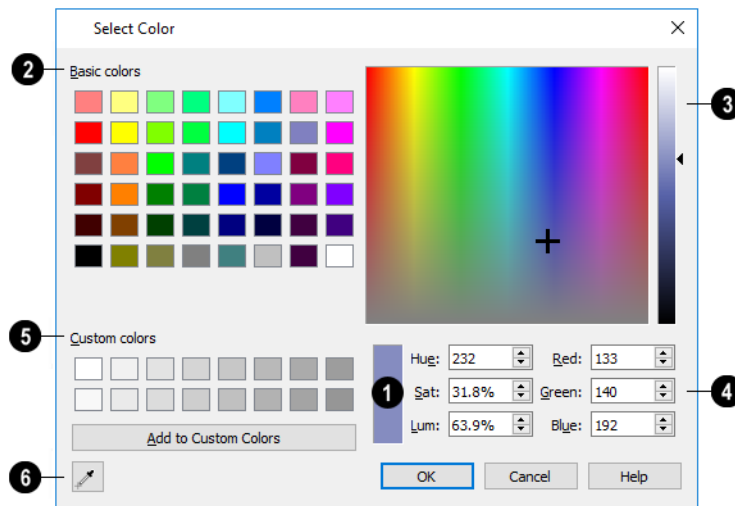
located by the temporary line, you can snap
to it.

Color Chooser Dialog

The **Color Chooser** dialog is opened
by clicking the **Color** button in the
Text Specification dialog or on the Color bar
on the LINE STYLE and ARROW panels of the
Line Specification dialog. See "Text" on
page 71.

The currently selected color displays in
the rectangle at the lower center of the
dialog. There are a number of ways to select
a color in this dialog.

Click in any one of the **Basic colors**
boxes to select it.

Click anywhere in the color spectrum
area to select a color.

• The location of a selected color is identi-
fied by a black cross hairs and its Hue,
Saturation, and RGB values will display
below and update as you click.

• Click anywhere in the vertical bar or drag
the arrow to adjust the selected color's
Luminosity and RGB values.

Define the selected color by specifying
its **Hue**, **Saturation**, and **Luminosity**
(HSL) or its **Red**, **Green**, and **Blue** (RGB)
values.

Click in one of the **Custom colors**
boxes to either select it as the new color
or to specify it as the box for a new custom
color to be defined.

Click the **Color Chooser Eyedropper**,
then click anywhere on your monitor to
select the color displaying at that location.

Click **OK** to apply the current selected color to the Text or Line with Arrow's line or fill style.

Getting Help

There are many forms of help available in the Chief Architect Viewer including: Tool Tips, the Status Bar, and the online Help menu.

All these forms of help assume you have a basic working knowledge of your operating system, including how to use a mouse, open, close and save files, copy, paste, and right-click to access contextual menus. Help also assumes you are familiar with basic computer terminology.

More information is available in the product documentation in electronic format and on Chief Architect's official web site, chiefarchitect.com.

Tool Tips

When you move the pointer over a toolbar button or menu item, a **Tool Tip** displays, offering a brief description of the tool. More information displays in the Status Bar at the bottom of the window.

Contextual Help

Online **Help** is a searchable menu that provides information about all of the tools in the Chief Architect Viewer. Select **Help> Launch Help** to open the program's Help and explore the table of contents, browse the Index, or Search for keywords.

The Help can also be used to provide instant information about toolbar buttons, menu items, and objects in your plan.

- When you move the cursor over a toolbar button or menu item, a brief summary of that tool displays in the Status Bar. Press the F1 key to open online Help to a page with more information about the tool.

- When an object is selected, edit handles display. Place the cursor over an edit handle and press **F1** to open online Help to a page with information about that handle.

- Press the **Help** button in any dialog box to open online Help to a page describing the options in that dialog.

Warning and Information Messages

As you work, the program may occasionally present Warning or Information messages regarding the operations you are performing. These messages are intended to help you use the program as designed and avoid potential problems. See "Message Boxes" on page 15.

View Reference Manual

Select **Help> View Reference Manual** to view the contents of the Help Contents and Index in on online **.pdf** file.

Chief Architect strives to make our documentation as helpful as possible for all of our customers. Please send any suggestions to documentation@chiefarchitect.com.

About Chief Architect

Select **Help> About Chief Architect Viewer** in Windows® or **Chief Architect> About Chief Architect** in macOS™ to view the program's version number and its release date.

Contact information for Chief Architect, Inc. is available on the MORE INFORMATION panel.

File Management

The Chief Architect Viewer reads and edits two main document types: **.plan** files and **.layout** files. The complete 3D model of a structure, surrounding terrain and any CAD data associated with it are stored in the plan file. Data used to create working drawings and the links to various views or details are stored in the layout file.

All commands related to opening, saving and closing plans are located in the File menu. You can also open plans from the **Startup Options** dialog. See "Startup Options" on page 8.

Chapter Contents

- Compatibility with Other Programs
- Chief Architect Viewer Data
- Opening a Plan or Layout File
- Saving and Exporting Files
- Auto Archive
- Undo Files
- Exiting The Chief Architect Viewer

Compatibility with Other Programs

Plans and layout files produced in the following programs can all be read by the Chief Architect Viewer X10.

- Chief Architect® 10.0 through X9

- All Better Homes and Gardens Home Designer® products, Interior Designer, and Landscaping and Deck Designer, Versions 7 and 8.

- All Chief Architect Home Designer® products, Interior Designer, and Landscaping and Deck Designer, Versions 9 through 2018.

Files that have been opened and saved in the Chief Architect Viewer X10 can be read again in Version X10 Chief Architect programs and Version 2016 Home Designer programs, allowing you to share your thoughts and ideas with your design professional.

Files that have been opened and saved in Chief Architect Viewer X10 cannot be read by any of the program versions listed above.

Plans and layout files produced in the Windows® version of the Chief Architect Viewer X10 can be read in the Mac® version, and vice versa.

Chief Architect Viewer Data

When the Chief Architect Viewer X10 is installed, the program automatically creates a folder in the user Documents directory called **Chief Architect Viewer X10 Data**. This folder contains important information and should not be moved, renamed or deleted.

> ⚠ If the Chief Architect Viewer X10 Data folder is renamed, moved or deleted, the program will automatically replace it using default information from the Chief Architect Viewer installation folder. When this occurs, customized user settings and custom user library content will not be available.

Because the Chief Architect Viewer X10 Data contains custom user data, it is not deleted when the program is uninstalled.

Opening a Plan or Layout File

The Chief Architect Viewer allows you to open, view and add comments to plan and layout files created for you by your design professional. Before opening one of these files, you must copy it onto your computer's hard drive.

It is recommended that you not save these files in the program's installation folder. A good location for these files is your Documents directory, which is specifically intended for your own files.

Plan and layout files often refer to external support files such as images that your design professional may have also given to you. It is best to keep all files associated with your drawings in the same folder.

For example, you can create a folder called "Chief Architect Viewer Plans" or another name you prefer and then copy all the files given to you there. See your operating system's Help to learn how to create folders.

⚠ Never open a file located on a server or other computer on a network, or on a removable storage device. Copy such files to your local machine's hard drive first, and then open the copy.

When the file you wish to open and any support files are saved on your computer,

select **File> Open Plan** 📁 to open a **.plan**

file or **File> Open Layout** 📄 to open a **.layout** file located on your computer. The Chief Architect Viewer automatically browses to the directory you last used to open a file.

In the **Look in** drop-down, browse to the location on your computer where the file you wish to open is saved.

Any folders and either **.plan** or **.layout** files in the current location display in the field below.

Click on the file you wish to open. Its name will display in the **File name** text field.

To open files of a different type, select one from the **Files of type** list. The only file types available are **.plan** and **.layout**.

When the desired file is selected, click **Open**.

The **Open Plan File** and **Open Layout File** dialogs can be resized by clicking and dragging the lower right corner.

Recently Opened Files

The names of the plan and layout files you most recently opened or saved display at the bottom of the **File** menu. You can click on a recent file to open that file without using the **Open File** dialog.

The names of recently open files also display in the **Startup Options** dialog. Click on the name of a file to open it. See "Startup Options" on page 8.

Saving and Exporting Files

🖫🖫 There are two options for saving plan and layout files: **File> Save** and **File> Save As**.

When you first open a file in the Chief Architect Viewer, it is recommended that

you use **Save As** 🖫 to modify the name of the file so that it can be distinguished from the original file that you received from your design professional.

To save a plan or layout file

1. Select **File> Save As** 🔲 to open the **Save File** dialog.

2. Particularly if you were sent both plan and layout files, it is best to use the same location as the original files. See "Opening a Plan or Layout File" on page 22.

3. In the **File name** text field, type a name for the file.

> 💡 Rather than type a new name, you can click before the file name to place your cursor at that location, then type "Edited_" to distinguish this file from the original.

4. Chief Architect Viewer automatically assigns the **File of type** and file extension **.plan** to plan files and **.layout** to layout files.

5. When both the Save in location and File name are correct, click **Save**.

Both **Save** 🔲 and **Save As** 🔲 can be used to save your plan and layout files; however, they accomplish this in two different ways.

* **File> Save** 🔲 saves the current state of your plan or layout file without changing its name and should normally be used for saving your work.

* **File> Save As** 🔲 opens the **Save File** dialog, allowing you to save the plan file using a different name or location on your computer.

Initially, all **Open** 📁 and **Save As** 🔲 operations go to the "My Documents" folder of your computer. After that, the location last visited is remembered and subsequent

Open 📁 or **Save As** 🔲 commands default to the directory last used for that operation. This path is saved when the program exits. The next time Chief Architect Viewer is launched, these defaults are used.
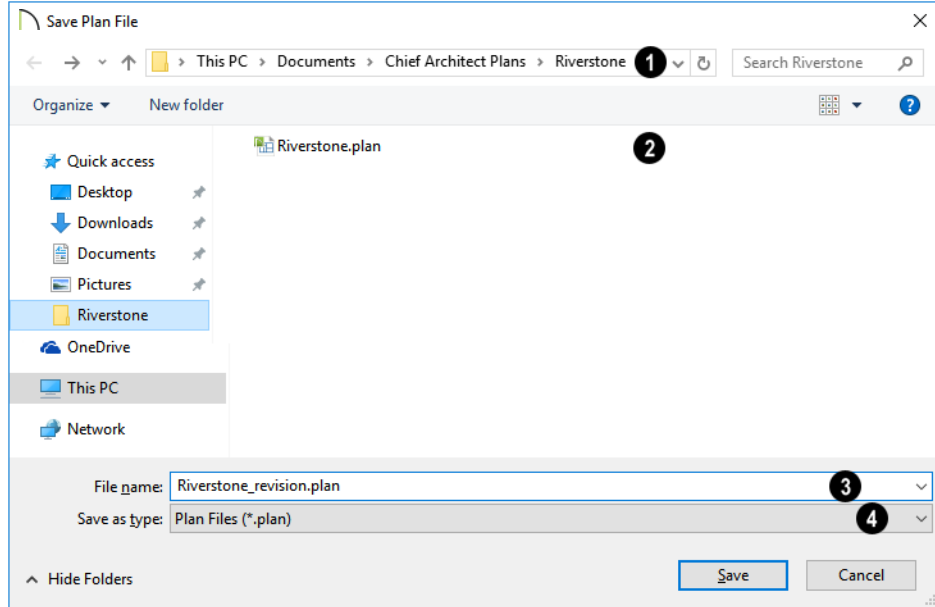
Save File Dialog

The **Save File** dialog uses the operating system's file save dialog format, and is also used when exporting files. The dialog name may vary, depending on the type of file being saved or exported.

A similar **Select Folder** dialog allows you to select a folder to which files can be exported.

① Choose a location on your local computer for the file you are saving.

② Any existing folders and/or files in the current location display here.

③ In the **File Name** field, type a name for the file. If you select an existing file from the space above, its name will display here automatically.

④ When saving a file, the program will choose the appropriate file type from the **Save as type** drop-down list. When exporting, you may need to choose a specific file type.

Exporting Files

The Chief Architect Viewer has options for exporting information out of and your drawings. See "Pictures, Metafiles, and Walkthroughs" on page 85.

File export dialogs are simply versions of the **Save File** dialog.

Backing Up Your Files

It is always a good idea to create backup copies of all your important files on your computer.

It is strongly recommended, however, that you never save directly:

• Across a network, such as onto a server;

• Onto removable media such as a USB thumb drive, CD, or DVD;

• Across the Internet.

Instead, copy your files to such locations only after you have saved them on your computer's hard drive and exited the program.

Archive folders are used by Chief Architect Viewer to manage prior versions of your files. You should not view these files as a substitute for your own backup routine, and should never save a file in an archive folder.

When backing up your Chief Architect Viewer files, consider backing up not only your **.plan** files, but your custom user data, as well - including library content, toolbar configurations, and textures. This custom data is all located in the Chief Architect Viewer Data folder, so it can be easily backed up. See "Chief Architect Viewer Data" on page 22.

Auto Archive

The first time a plan or layout is saved, the Chief Architect Viewer creates an Archive folder in the Chief Architect Viewer Data folder. The Archive folder contains Auto Save and Archive files.

The program does not create Auto Save and Archive files for untitled plans and layouts. In order for these to be created, a file must have been previously saved and given a name and save location on your computer. Further, Archive files are only updated when you save your work.

Auto Save and Archive files should not be viewed as a substitute for regularly saving your work by selecting **File> Save** 🖫 or pressing Ctrl + S on the keyboard, nor should they be considered an alternative to your own file backup routine.

Archive Files

Every time a drawing is saved, Archive files that keep a historical archive of your plan are automatically created or updated.

> ⚠ If you do not save your work regularly, your archive files will not be updated.

Archive files are meant to be for emergency use only. If you must access an archive file, open it as you would any other file. See "Opening a Plan or Layout File" on page 22.

As soon as the file is open, use **Save As** 🖫 to save this file to another location.

Auto Save Files

As you work, the Chief Architect Viewer automatically creates Auto Save files at regular intervals when changes are made to a file but not saved by selecting **File> Save** 🖫.

These Auto Save files are appended **_auto_save.plan** or **_auto_save.layout** and are saved in the Archive folder.
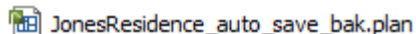
When you close a file normally, its Auto Save file is retained until the next time the file is opened - at which time the Auto Save file is overwritten.

🖼 JonesResidence_auto_save.plan

Auto Save file after normal shut-down

Auto save files created as a result of an improper program shutdown are appended **_auto_save_bak.plan** or **_auto_save_bak.layout**.

Auto Save file after abnormal shut-down

If your computer shuts down accidentally, you can recover some of your work by opening the **_auto_save_bak** file.

> ⚠ A file is auto saved only if you have saved it previously. Auto Save does not work for unnamed files.

When you reopen a file after a computer shut down or system crash, the program will notify you if an Auto Save file newer than the original file is found and give you the option to one that file.

Even with Auto Save, you should save your work manually on a regular basis using any of the following methods:

- Click the **Save** 🖫 button.

- Select **File> Save** 🖫.

- Press Ctrl + S on the keyboard.

Undo Files

The Chief Architect Viewer stores a set number of copies of all open plan file changes, known as undo files. Undo files are referenced whenever you select **Edit>**

Undo ↩ or **Edit> Redo** ↪.

Undo files are stored in your operating system's Temp directory. When the Chief Architect Viewer is closed normally, any current Undo files are deleted.

Exiting The Chief Architect Viewer

Select **File> Exit** to exit the program. If you have not saved any open files, you will be reminded to do so. It is better to save your work before exiting than to save on exit. See "Closing Views and Files" on page 39.

When you exit from the program using **File> Exit**, all Autosave files and Undo files are automatically deleted.

On a Mac, if you click the program window's red **Close** button, the window will close but the program itself will continue to run. To close it down completely, right-click on its icon on the Dock and select **Quit** from the contextual menu.

Multiple Floors

Chief Architect plan files can have up to 30 floors, plus a foundation and attic. The Chief Architect Viewer allows you to view all of them in a variety of ways.

Chapter Contents

Displaying Floors

The Chief Architect Viewer allows you to view the floors in your plan in a variety of ways.

In Floor Plan View

In floor plan view, only one floor can be active for editing at a time. This is referred to as the Current Floor. See "The Current Floor" on page 30.

In addition to the Current Floor, one other floor can be displayed for reference purposes: the Reference Floor. Objects on the Current Floor can snap to those on the Reference Floor, helping you align objects. See "The Reference Floor" on page 30.

In 3D Views

In most 3D views, all floors in a plan are visible, from the foundation up to the attic. There are two exceptions:

- **Floor Camera** views, which show the Current Floor only.

- **Floor Overviews** , which show the Current Floor, not including its ceiling, plus any floors beneath it.

See "3D View Tools" on page 49.

Exchanging Floors

Select **Build> Floor> Exchange With Floor Above** or **Exchange With Floor Below** to swap the current floor with the floor above or below.

The floor that was moved becomes the current floor at its new location. You can easily move a floor up or down several floors by using either one of these buttons repeatedly.

The Current Floor

Only one floor can be active at any given time. The active floor is referred to as the **Current Floor**.

Floor Up / Floor Down

∨ 1 ∧ If you are working with more than one floor, you can select **Tools> Reference Floors> Up One Floor** or **Down One Floor** to switch from one floor to another.

You can change the current floor in floor plan and 3D views. The current floor displays on

the **Change Floor/Reference** 1 button,

which can be found between the **Down One Floor** and the **Up One Floor** buttons.

Floors become available once they have been built. The Attic and foundation levels are also accessible using these tools.

Change Floor / Reference

1 If there are multiple floors, select **Tools> Reference Floors> Change Floor/Reference** to open the **Change Floor/ Reference** dialog, where you can select both the current floor and which floor is used in the Reference Floor, as well as control the appearance of the Reference Floor.

The Reference Floor

When there is more than one floor in a model, it is often helpful to see how they relate to each other. Any floor can be shown as the **Reference Floor** along with the current floor.

Reference Floor Display

To turn on the Reference Floor, select **Tools> Reference Floors> Reference Floor Display** or press F9 on your keyboard.

Note: If objects on the current floor and the Reference Floor have edges that line up, the Reference Floor may be difficult to see on screen. When lines of two different colors are superimposed upon each other, discoloration may result.

Reference Floor Display Options

The display of objects in the Reference Floor is controlled by

selecting **Tools> Reference Floors> Reference Floor Display Options**. See

Change Floor / Reference Dialog

By default, the floor below the Current Floor is the Reference Floor, but any floor can be referenced using the **Change Floor/Reference** dialog. To open

the dialog, select **Tools> Reference Floors> Change Floor/Reference** button.

When this dialog is accessed from a camera view, only the Current Floor settings will be active.
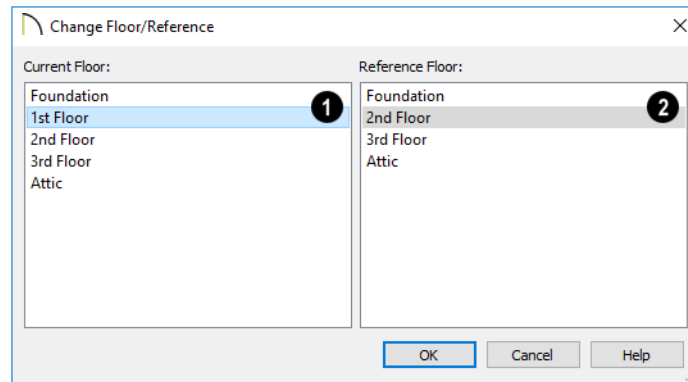
① The **Current Floor** is highlighted here. You can select another floor to make it the current floor.

② The **Reference Floor** currently used for reference is highlighted here. You can select another floor to display it instead.

Swap Floor/Reference

If one floor is defined as the current floor and another floor is defined as the reference floor, select **Tools> Reference Floors> Swap Floor/Reference** to switch the status of the two floors.

Window and View Tools

The View and Window Tools let you control how views of your drawing are shown on screen, as well as toggle useful drawing aides on and off.

One layout file can be open at a time, but there is no limit to the number of plan files that can be open. The name of the file and the type of view displays at the top of each view window in its title bar. If the view is saved, its name also displays.

Chapter Contents

- View Windows
- Working in Multiple Views
- View Tools
- Zoom Tools
- Undo Zoom
- Fill Window
- Panning the Display
- Closing Views and Files

View Windows

In Chief Architect Viewer, there are several different types of views:

- Plan, Camera, and Cross Section/Elevation Views are found in plan files only. Plan Views

- 3D Views

Each view displays in a view window. While multiple views can be open and display on screen, only one view window can be active at any given time. See "Working in Multiple Views" on page 34.

Working in Multiple Views

Although only one layout file can be open at a time, there is no limit to the number of plan files that can be open, nor is there a limit to the number of plan view windows that can be open. The name of the file and the type of view is stated at the top of each view window in its title bar as well as in its tab. If the view is saved, its name displays instead of the view type.

By default, Chief Architect Viewer uses a tabbed document interface, which means that when more than one view window is open in the program window, each open window will have a tab that displays in a row above the currently active view.

- Each tab states the name of file and either the name of the view or the view type.

- Each tab features an icon indicating its type of view.

- Click on a tab to make it the active view.

- If there is not enough room in the program window to display all tabs, left and right arrow buttons allow you to scroll through the tabs.

- Tabs can be reordered by clicking and dragging.

There is no limit to the number of 3D view windows that you can have open at a given time; bear in mind, though, that each window demands use of your computer's resources and that you may see poor performance if too many views are open. See "3D Views" on page 47.

There are several ways to close a view window. See "Closing Views and Files" on page 39.

Tiling Views

As an alternative to tabbed views, windows can instead be tiled. Tiling allows you to display multiple views in a single Chief Architect Viewer window so you can see the results of changes in floor plan view in 3D or vice versa. It can also be useful for copying objects from one plan to another.
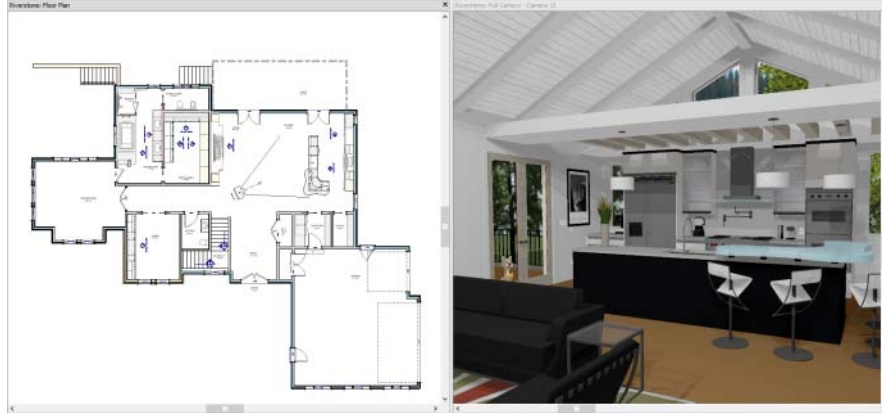
Floor plan view and a camera view Tiled Vertically

There are several ways to create tiled views:

* Click and drag a view window's title bar or tab into the part of the drawing area that you would like it to be. When a high-lighted space is created, release the mouse button.

* Select **Window> Tile Horizontally** ▭ to display views in a horizontal orienta-tion, one above the other.

* Select **Window> Tile Vertically** ▯ or press Shift + F6 on the keyboard to dis-play views in a vertical, side by side, ori-entation.

Views are tiled left to right or top to bottom in the order in which they were last active: the most recent view is on the left or at the top, while least recent is on the right or on the bottom.

* To activate a view, click on its title bar or anywhere in the view window. Note that any changes you make in the active win-dow are reflected in other views as well.

* To end window tiling, select **Window> Tab Windows**. You can also end tiling by double-clicking on the title bar of the pro-gram window.

Multiple Program Windows

To create a second program window, click and drag the title bar or tab of a view window completely out of the current program window: for example, onto a second monitor. A second Chief Architect Viewer program window will be created with its own menu and toolbars.

Swapping Views

There are a number of ways to switch between open view windows:

* Click on a view window's tab.

* Select **Window> Select Next Tab** 🔳 or **Window> Select Previous Tab** 🔳 to cycle through all open views in the order you prefer.

- In Windows, press the Ctrl + Tab (Next Window) or Ctrl + Shift + Tab (Previous Window) keys to cycle through all open views.

- On a Mac, press the Ctrl + } (Next Window) or Ctrl + Shift + { (Previous Window) keys to cycle through all open views.

- A list of all the views currently open is located at the bottom of the Window menu. Each view is identified by its name and what type of view it is. A checkmark is beside the view that is currently active. Select one to go directly to that view.

If more than eight view windows are open, **More Windows** will be the last item in the Window menu. Select this option to open the **Select Window** dialog:

Select the name of a view in the list and click **OK** to make it the active view.

View Tools

The **View Tools** allow you to open and close the program's side windows, as well as toggle a variety of references and drawing aides. Select the **View** menu to access these tools.

Refresh Display redraws the current window to clean up extra lines, show missing items, and correct random on-screen effects caused by changes to the model.

Tool Palette opens and closes the Tool Palette, which will display related tools.

Scrollbars displays and suppresses scrollbars on view windows.

Color toggles the display of color in the current view.

Crosshairs toggles the use of the blue crosshairs centered on the mouse pointer in most views.

Zoom Tools

Zoom is used to magnify any given area on the plan or 3D view. Select **Window> Zoom**, then click and drag a marquee around an area on screen. When you release the mouse, the selected area expands to fill the screen.

Note that in 3D views, using **Zoom** does not reposition the camera. This can lead to inconsistencies between a camera's position and what is actually shown in the view if other methods of zooming are used later. See "Repositioning Cameras" on page 55.

When the zoom is complete, whatever tool was active prior to selecting the **Zoom** tool automatically becomes active again. If another zoom is needed, click the **Zoom** tool again.

Zoom In - Click to zoom in towards the screen center by a factor of two.

Zoom Out - Click to zoom out from the screen center by a factor of two.

Undo Zoom - Reverse the last zoom operation.

Fill Window - Fits all visible items on screen.

Fill Window Building Only - Fits all walls and railings on the current floor on screen.

Zooming With the Mouse Wheel

Use the mouse wheel to zoom in and out in all view windows. Scrolling the mouse wheel one click up or down zooms in or out, centering on the location of your pointer and changing the zoom by about 10%.

By default, zooming in 3D views changes the camera's position. See "Mouse Scroll Wheel and Trackpad" on page 55.

Note: Depending on the configuration of your mouse, it may be necessary to hold down the Ctrl key while turning the mouse wheel. If zooming in and out are not working correctly, contact the manufacturer of your mouse and mouse driver for their assistance.

Undo Zoom

Select **Window> Undo Zoom** to reverse the last zoom operation.

Note: Undo and Redo do not affect zoom.

Zoom and **Undo Zoom** are also available through the contextual menu. See "Contextual Menus" on page 13.

Fill Window

In floor plan view or a cross section/ elevation view, select **Window> Fill Window** or press the **F6** key to view nearly everything on screen that is visible, including the Reference Display. CAD Points are the only objects that are not included when Fill Window is used.

If you are zoomed in so that only a portion of the drawing displays on screen, selecting **Fill Window** zooms out so that the entire view fits on the screen. If you are zoomed out so that the entire drawing is smaller than the screen, selecting **Fill Window** zooms in until the drawing fills the screen.

When the drawing sheet is shown, **Fill Window** zooms to the sheet borders.

Fill Window Building Only

Window> Fill Window Building Only is similar to **Fill Window**, but zooms in or out to so that all walls and railings in the view fill the current window. Other objects are ignored.

In 3D Views

In 3D views, **Fill Window** and **Fill Window Building Only** adjust the camera's Field of View is adjusted so that all surfaces in the 3D view are included.

Panning the Display

There are four ways to pan the display without changing the zoom factor.

Using the Scroll Bars

One method is to use the scroll bars on the right and bottom edges of the window.
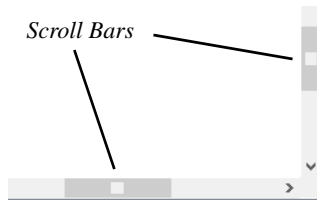
Scroll Bars

- Drag the square button in the bar itself in order to pan a larger distance.
- Click the end arrow keys on the scroll bars to shift the display in 12" increments.

Using the Arrow Keys

In floor plan view, the arrow keys on the keyboard work exactly like clicking the arrow buttons on the scroll bar.

Using the Mouse

If you have a wheel mouse, you can pan the display by pressing the middle mouse button, or wheel, and moving the mouse in the direction you would like to pan. When the middle mouse button is held down, the pointer changes to a hand icon.

In the Mac version of Chief Architect Viewer, you can pan using the left mouse button and Command key.

Mouse drivers sometimes have other functions assigned to the wheel and buttons. These override the Chief Architect Viewer setting.

Using a Mac Trackpad

In the Mac version of Chief Architect Viewer, you can two finger drag to pan the display. See "Using a Trackpad" on page 10.

Using the Pan Window Tool

The **Pan Window** tool works much like the mouse wheel method.

Select **Window> Pan Window** . The pointer changes to a hand icon. Click and drag to pan the window. The program reverts to the previously active tool when you release the mouse button.

Closing Views and Files

If a view is still needed, you can swap to a different view without closing it. If, however, a view is no longer needed, it can be closed. There are several ways to close a view window:

- Select **File> Close** to close the active window.

- Press Ctrl + W or Ctrl + F4 on the keyboard to close the active window.
- Click the **Close** button in the active view's title bar or in any view's tab.
- A tabbed view can be closed by clicking on its tab using the middle mouse button.

- Select **File> Close All 3D Views** to close all currently open camera view windows instead of just the active window.

- Select **File> Close All Views** to close all currently open view windows instead of just the active window.

If a plan has only one view window open and you try to close it, the program will prompt you to save before closing if there are any unsaved changes. See "Saving and Exporting Files" on page 23.

> Although the program warns you if you try to exit without saving, you should get in the habit of saving plan files before exiting.

Even if all view windows are closed, the program can still be open. See "Exiting The Chief Architect Viewer" on page 27.

Displaying Objects

Layers allow you control which objects display in floor plan and camera views.

Layers

Layers are used to organize and manage the display of all objects in all views. A layer can be thought of as a transparency sheet with objects placed on it for viewing. Nearly all views use multiple layers, like a stack of transparencies put together to show different types of objects.

You can find out which layer an object is on by selecting the object and looking at the Status Bar. And, you can specify whether each layer displays in a particular view in the **Layer Display Options** dialog.

Multiple layers are organized into Layer Sets, which allow you to control which objects display in different views.

Layer Sets

Layer Sets are used to control the layer settings for different views in a plan or layout file.

A layer set consists of a complete list of the layers in the current plan or layout along with the display settings for each layer as set for a particular type of view. These display settings can be modified, and can be different for each type of view. See "Layer Display Options Dialog" on page 42.

Layer sets are file specific, which means that changes made in one plan or layout file have no effect on the settings in other files.

The Chief Architect Viewer uses a different layer set for the each type of view of your plan:

• Floor plan view.

• Camera views and Overviews. See "3D View Tools" on page 49.

• Elevation views. See "3D View Tools" on page 49.

• Framing Overviews. See "Framing Overview" on page 52.

• Reference Floor. See "The Reference Floor" on page 30.

While any view is active, select **Tools> Display Options** ☑ to make changes to the layer set used for that view type.

Any changes made to settings in the **Layer Display Options** dialog for one particular view will affect all views using that same layer set. For example, if you make changes for a camera view, all camera views and overviews in the current plan will be affected.

Layer Display Options Dialog

☑ The **Layer Display Options** dialog controls the display of layers in the active layer set. It consists of a table that lists all available layers and the attributes for each.

From any view, select **Tools> Display Options** ☑ to open the **Layer Display Options** dialog.

There are a number of dialogs similar to **Layer Display Options** in the program:

• Select **Tools> Reference Floors> Reference Floor Display Options** ☑ to open the **Layer Display Options** dialog with the Reference Display Set active. See "The Reference Floor" on page 30.

• Select **Tools> Display Options** ☑ in a layout to open the **Layout Page Display Options** dialog.
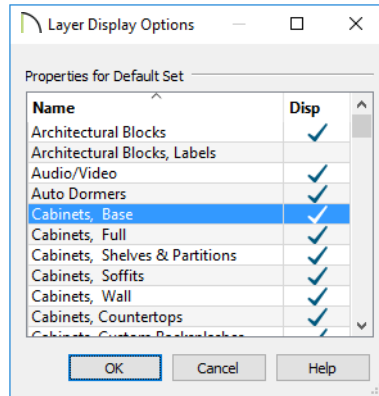
The layers in the **Layer Display Options** dialog can be sorted by either of its columns.

- Click in the **Disp** column to remove or add a checkmark. A checkmark indicates that the layer is set to display in the current view.

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

- Click **Cancel** to close the dialog, ignoring any edits.

Note: Not all objects display in all views. For instance, invisible walls do not appear in camera views.

Display Toggles

There are a number of toggles and tools that can be used to affect the appearance of the on-screen display.

Print Preview

Print Preview and its related display toggles allow you to get a sense of what the current view will look like when it is printed. See "Print Preview" on page 90.

Refresh Display

Refresh Display redraws the current window to clean up extra lines, show missing items, and correct random on-screen effects caused by changes to a model. Select **View> Refresh Display** or press the F5 key to refresh the on-screen display.

Color On/Off

The display of color on-screen can be toggled on and off in any view by selecting **View> Color**.

- If **Color** is toggled off in any 3D view other than a Vector View, the view will be displayed in grayscale.

- If **Color** is toggled off in any line based view, including floor plan view, Vector Views, and layout, the view will be displayed in black and white

You can also print in color or gray scale. See "Print View Dialog" on page 92.

Delete Surface

In any 3D view, select **3D> Delete Surface**, then click a surface in the view to temporarily remove the surface from

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the current view. See "Delete 3D Surface" on page 54.

Select Color Dialog

The **Select Color** dialog can be opened by clicking on the color bar that can be found in many dialogs throughout the Windows version of the program. In the Mac version, the standard **Colors** dialog, or Color Picker, is used.
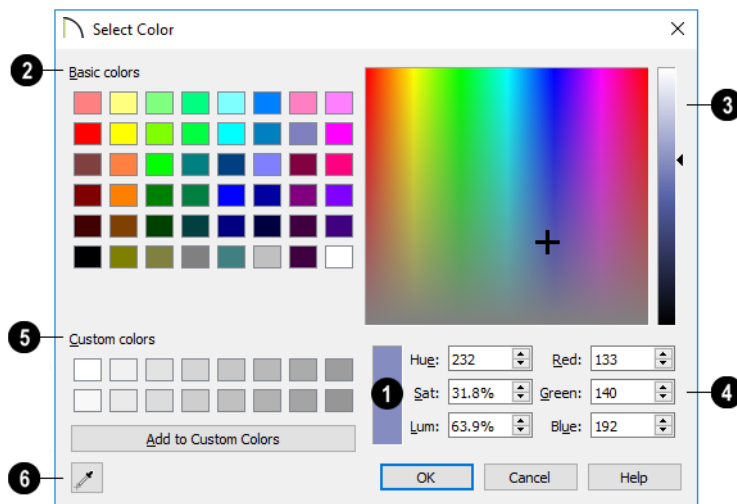
1 The currently selected color displays in the rectangle at the lower center of the dialog. There are a number of ways to select a color in this dialog:

2 Click in any one of the **Basic colors** boxes to select it.

3 Click anywhere in the color spectrum area to select a color.

• The location of the selected color is identified by a crosshairs.

• Click anywhere in the vertical bar or drag the arrow to adjust the selected color's Luminosity and RGB values.

4 Define the color by specifying its **Hue**, **Saturation**, and **Luminosity** (HSL) or its **Red**, **Green**, and **Blue** (RGB) values.

5 Click in one of the **Custom colors** boxes to either select it or to specify it as the box for a new custom color to be defined.

• Click the **Add to Custom Colors** button to add the selected color to the Custom Colors group.

6 Click the **Color Chooser Eyedropper**, then click anywhere on your monitor to select the color displaying at that location.

💡 You can select a color from any program window. Before opening the Color Chooser dialog, make sure the desired color can be seen on screen.

lick OK to apply the currently selected color to the object's line or fill style, or to the material's pattern color.

3D Views

Little preparation is needed to create a 3D view of a model: simply click a button to create an overview or click and drag to create a camera or cross section/elevation view.

Chapter Contents

- OpenGL and Hardware
- Camera Defaults Dialogs
- 3D View Tools
- Creating Camera Views
- Creating Overviews
- Cross Section/Elevation Views
- Displaying 3D Views
- Repositioning Cameras
- Editing 3D Views
- Cross Section Slider
- Saving and Printing 3D Views
- Camera Specification Dialog

OpenGL and Hardware

Chief Architect Viewer features an easy to use rendering engine that makes use of OpenGL rendering technology, which has good hardware support on most video cards.

To take full advantage of thes rendering capabilities of Chief Architect Viewer, a graphics card or chipset that supports OpenGL 3.3 on Windows or 4.1 on Mac is required.

Vector Views are non-photorealistic views in which objects are drawn using surface edge lines, or vectors. Limited lighting and shadows can be calculated and materials are represented using pattern lines and solid colors. See "Vector View" on page 69.

Once a 3D view is created, you can specify whether it uses the Standard or Vector View rendering technique. See "Rendering Techniques" on page 68.

Camera Defaults Dialogs

There are several defaults dialogs for cameras, which can be accessed by selecting **3D> Edit Camera Defaults**. Select an item in the submenu to open the defaults dialog associated with your selection:

The settings in the **Camera Defaults** dialogs control the initial use of effects that improve the appearance of 3D views. Select **3D> Edit Camera Defaults** to open this dialog.

The settings in these dialogs are also found in the **Camera Specification** dialog. See "Camera Specification Dialog" on page 64.

Once a camera is created, its attributes can be customized. See "Editing 3D Views" on page 60.

Full Camera Defaults

Specify the initial attributes of cameras created using the **Full Camera** tool. See "Camera Views" on page 49.

The settings in this dialog are the same as those in the **Full Camera Specification** dialog. See "Camera Specification Dialog" on page 64.

Floor Camera Defaults

Specify the initial attributes of cameras created using the **Floor Camera** tool.

The settings in this dialog are the same as those in the **Floor Camera Specification** dialog.

Perspective Full Overview Defaults

Specify the initial attributes of cameras created using the **Perspective Floor**

Overview tool. See "Full Overview" on page 51.

The settings in this dialog are the same as those in the **Perspective Full** and **Framing Overview Specification** dialogs.

Perspective Floor Overview Defaults

Specify the initial attributes of cameras created using the **Perspective Floor**

Overview tool. See "Full Overview" on page 51.

The panels in this dialog are the same as their respective panels in the **Perspective Floor Overview Specification** dialogs.

Cross Section/ Elevation Defaults

Specify the initial attributes of cameras created using the **Cross Section/**

Elevation tool. See "Cross Section/ Elevation Views" on page 50.
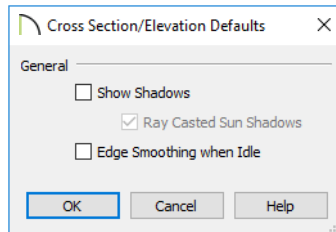
- Check **Show Shadows** to turn on shadows in the selected camera view. When unchecked, shadows are not generated. See "Shadows" on page 68.

- Check **Ray Casted Sun Shadows** for higher quality shadows cast by sun light. Ray Casted Sun Shadows take longer to generate than regular shadows and only refresh when the camera is not moving.

- Check **Edge Smoothing When Idle** to apply high quality edge smoothing to edge and pattern lines when the selected camera is not in motion. See "Edge Smoothing" on page 68.

3D View Tools

Select **3D> Create Camera View** to display the Camera View Tools.

Camera Views

The **Full Camera** tool creates multi-floor views of the 3D model. It can be used to create interior and exterior

perspectives, and is good for displaying cathedral ceilings, roofs, lofts, stairwell openings, and other variation in floor and ceiling levels.

The **Floor Camera** tool creates perspective views of the current floor only. Nothing above the ceiling surface is

generated, and neither is anything below the floor.

Overviews

The **Full Overview** tool creates views of the entire model including all floors, ceilings, and the roof.

The **Floor Overview** tool creates views of the current floor with the ceiling removed and all floors beneath it visible.

The **Framing Overview** tool creates views of the framing in the model. Framing must be present in the plan in order

for it to display in a framing overview. See "Framing Overview" on page 52.

Cross Section/Elevation Views

Cross Section/Elevation views are similar to the traditional, scaled orthographic views often used in drafting. They are scaled and can be fully annotated. See "Cross Section/ Elevation Views" on page 52.

A **Cross Section/Elevation** view displays all floors of the model. If the view is created outside the structure looking toward it, the result is an exterior elevation. If the view is created inside the structure, or passes through any of the structure, a cross section is created.

Creating Camera Views

All Camera views are created using the same method.

To create a camera view

1. In floor plan view, select the desired camera tool. The mouse pointer displays the camera 📷 icon.

2. Click and drag a line to define the view direction.
    • Where your line begins is the camera's position.
    • The line that you drag defines the direction the camera is pointed.
    • The end of the line is the focal point of the view, the point the camera rotates around.

• The field of view is 45°, which is similar to what the human eye sees or a 50mm camera lens.
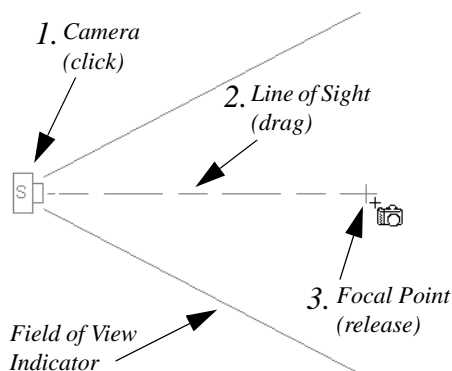
3. When you release the mouse button, a view generates in a new window.

4. Return to the floor plan view. A camera symbol now displays in floor plan view.

See "Working in Multiple Views" on page 34.

Camera Height

By default, Cameras are created at a height of 60" (1500 mm). Where this height is measured from depends on the location of the camera:

- If the camera is inside of a room, it is measured from that room's subfloor.

- , it is measured from the default height of the subfloor for the current floor.

Once created, a camera's height can be modified in its **Camera Specification** dialog

Creating Overviews

In the Chief Architect Viewer, there are three different overview types: Full, Floor and Framing Overviews.

Overviews generate as soon as you select the tool and are always created at the same angle. The focal point is always located at the center of the model; however, the position of the camera will vary depending on the size of the 3D model. The larger or more spread out the model, the further away the camera will be from the focal point so that the entire model can be seen in the view.

Once generated, an overview window's title bar indicates view type and a camera symbol representing the overview displays in floor plan view, The overview 'camera' can be edited much like regular camera views can. See "Editing 3D Views" on page 60.

Full Overview

Select **3D> Create Camera View> Perspective Full Overview** to generate an exterior view of the entire model.

Floor Overview

Select **3D> Create Camera View> Floor Overview** to create a view of the current floor with the ceiling removed and all floors beneath it visible.

Floor Overviews are an effective tool for illustrating traffic flow and the relationships between spaces.

To see a different floor, select **Tools> Reference Floors> Up One Floor** or **Down One Floor** . You can also return to floor plan

view and make another floor current before generating the Floor Overview

Framing Overview

Select **3D> Create Camera View> Framing Overview** to create a view of the entire model, displaying only framing and the foundation.

Select **3D> Create Camera View> Framing Overview** to create a view of the

entire model, displaying only framing and the foundation.

Framing overviews include all floor, wall, and roof framing as well as foundations.

Cross Section/Elevation Views

The **Elevation** tool produces views in which all lines and dimensions are their true lengths, regardless of their distance from the camera.

Cross section/elevation views are the only 3D views that can be annotated with the Text tools.

Cross Section/Elevation Camera Tools

A **Cross Section/Elevation** view displays all floors of the model. The cross section begins at the point where the camera arrow is drawn and continues through the entire model.

To create a Cross Section/Elevation view

1. Select the **Cross Section/Elevation** tool. The pointer changes to a ⌖ with crosshairs marking the position of the pointer.

2. Click and drag a line in floor plan view.

*   A Camera symbol displays where you click, along with a Cross Section Line indicating the plane of the camera's cross section cut line.

Clip Plane Indicators
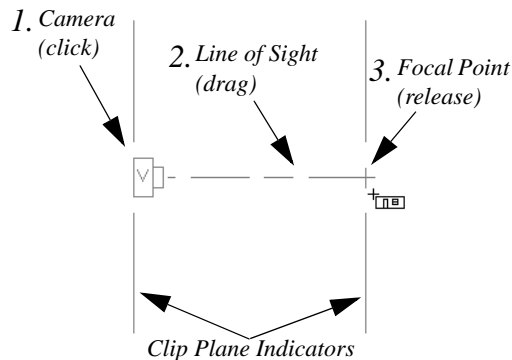
3. Drag in the direction of the Line of Sight to draw a camera arrow.

    *   Always drag the camera arrow perpendicular to the wall to be viewed.

4. When you release the mouse button, the view generates in a new window.

    *   If the view is a Backclipped Cross Section, a second Cross Section Line at the

end of the Line of Sight indicates the furthest extent of the backclip.

If the Line of Sight does not cut through a 3D object and the object is within the back clipped distance, such as a window shown in elevation, the object retains its 3D definition and can be selected, moved, stretched, or otherwise modified in the view. The 3D model is updated in all views.

Detailing Cross Section/ Elevation Views

Text objects can be created in cross section/ elevation views.If Text objects have been added to a cross section/elevation view, the program will prompt you to save the view before closing the window. This information is then stored in the view. See "Text" on page 71.

Displaying 3D Views

A variety of tools and settings allow you to control the appearance of your 3D views. There are also numerous ways to adjust the position, focal point and field of view of a 3D view. See "Editing 3D Views" on page 60.

The name of the current plan file and the type of view displays at the top of each view window in its title bar. If a 3D view is saved, its name also displays.

There is no limit to the number of 3D view windows that you can have open at a given time; bear in mind, though, that each window demands use of your computer's resources and that you may see poor performance if too many views are open. See "Working in Multiple Views" on page 34.

Layer Display Options

Which objects display in a 3D view is controlled in the **Layer Display Options** dialog. See "Layer Display Options Dialog" on page 42.

Different view types use different layer sets when they are created. See "Layer Sets" on page 42.

In Floor Plan View

Cameras are represented in floor plan view by symbols that indicate the camera's position, field of view and focal point.
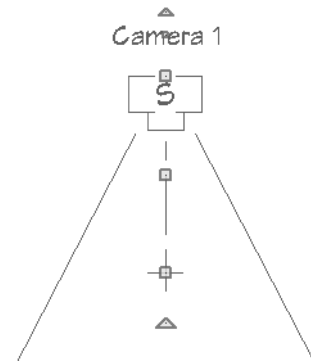
You can also display camera symbols for saved cameras when the "Cameras" layer is turned on. See "Layers" on page 41.

The symbols for Elevation views and Full Overviews display on all floors, while those for Full and Floor Cameras and Doll House Views display only on the floor where the view was created. See "Creating Camera Views" on page 50.

You can move a camera to a different floor by clicking the **Up One Floor** ⌃ or **Down One Floor** ⌄ button while the camera view is active. Note that this may affect what is seen in the view as well as its display in floor plan view. See "Floor Up / Floor Down" on page 30.

Both saved and unsaved active cameras can have labels indicating the camera number or its name. Camera labels are located on the "Cameras, Labels" layer.

Camera labels are numbered sequentially in each plan in the order they were created.

Camera symbols are an on-screen reference: they do not print unless **Print Image** is used.

In Rendered Views

There are a number of factors that contribute to the appearance of rendered 3D views:

• Select **3D> Camera View Options> Toggle Textures** 🗺 in a 3D view to turn off the display of material textures. Not available in Glass House or Vector Views.

• Select **View> Color** 🏠 to toggle between color and grayscale in 3D views. See "Color On/Off" on page 43.

In Vector Views

There are also a number of factors that affect the appearance of 3D Vector Views:

• Select **3D> Toggle Patterns** ▥ in a Technical Illustration or Vector View to turn on or off the display of the "Patterns,

3D Views" layer, which controls the display of material pattern lines. See "Layers" on page 41.

• Select **View> Color** 🏠 to toggle between color and black and white to control the display line and fill colors.

Delete 3D Surface

❎ The individual surfaces that make up objects can be temporarily removed from any 3D view by selecting **3D> Delete Surface** and then clicking on a surface. When the pointer is over a surface, that surface will become highlighted.

Surfaces removed in one view are removed in all 3D views, but are not permanently removed from the model. Continue clicking surfaces to remove them, then select another tool when you are finished.

Surfaces in 3D views are composed of multiple triangles. Hold the Alt key while clicking to delete one triangular face at a time rather than all triangles forming a surface.

To restore the most recently deleted surface, select **3D> Delete Surface** ❎ or click the toolbar button.

There are several ways to restore all deleted surfaces:

• Select **Build> Floor> Rebuild Walls/ Floors/Ceilings** 🏠,

• Exit the 3D view and reopen it.

• Generate a new 3D view.

Rebuild 3D

Select **3D> Rebuild 3D** to regenerate all 3D data associated with the current plan. All open views will remain open.

Repositioning Cameras

Once a 3D view is created, there are many ways to manipulate the camera location and the direction of its line of site using the mouse, the keyboard, and the menus.

When the keyboard, toolbar buttons, or menu commands are used to move or rotate a camera, the adjustments occur in regular increments. The size of these increments is specified in the **Camera Specification** dialog:

• The **Incremental Move Distance** controls Panning movement and forward and backward Dolly movement.

• The **Incremental Rotate Angle** controls Orbit movement, Tilt movement, and side to side Dolly movement.

Each time you move the camera, the view is updated. If you are using either the toolbar or keyboard to move the camera, you can hold down the Shift key, suppressing the redraw of the view until the Shift key is released and allowing you to move multiple increments more quickly.

> Press Ctrl + Alt + S while in a camera view or overview to spin the view. Press Esc to stop the spinning.

You can also move a camera to a different floor by clicking the **Up One Floor** ⌃ or **Down One Floor** ⌄ button while the camera view is active. Note that this may affect what is seen in the view as well as its display in floor plan view. See "Floor Up / Floor Down" on page 30.

Mouse Scroll Wheel and Trackpad

3D views can be panned and zoomed when any tool is active using the mouse scroll wheel or trackpad gestures. See "Using a Trackpad" on page 10.

The program adjusts the speed of these actions depending on characteristics of the camera:

• Zoom speed depends on how close the camera is to the object located behind the mouse pointer. When the target object is far from the camera, zooming is faster; as the camera gets closer to the target, zooming slows.

• Panning speed depends on the length of the camera's Line of Sight. In general, it is likely to be faster in an exterior view of a large model, slower in an interior view of a small room. See "Creating Camera Views" on page 50.

By default, panning and zooming adjusts the position and direction of the camera. It does not, however, adjust the distances at which surfaces are clipped. This means that if you zoom in closely on an object, some of its surfaces may be removed from the view. One way to avoid this is to lower the camera's **Clip Surfaces Within** value in the **Camera Specification** dialog. See .

3Dconnexion® 3D Mice

3Dconnexion®'s 3D mice can be used to navigate in all views - including camera views and overviews.

In the Windows version of Chief Architect, pre-programmed view direction hotkeys are supported on devices with buttons for that purpose. MacOS™ does not provide mapping support to the view direction commands; however, you can create custom hotkeys for the commands in Chief Architect and then program your 3D mouse to use those hotkeys. See Hotkeys.

You can specify whether navigation is centered about the camera or its focal point in the **Preferences** dialog. See "Render Panel" on page 61.

Note that rolling is not supported in Chief Architect and that 3D mice cannot be used to move the mouse pointer. For details about using your 3D Connexion® mouse, refer to its documentation.

Move Camera with Mouse

An active camera's position can be edited using the mouse. Select **3D> Move Camera With Mouse** to access the Move Camera with Mouse modes. These tools are not available in Cross Section/ Elevation views.

	Hotkey	Description
	Alt + O	**Mouse-Orbit Camera** lets you move the mouse to rotate the camera around its focal point. The camera's position and direction both change. To continuously rotate the camera around its focal point, click in the 3D view, drag the mouse, and release the mouse button to "throw" the view. Click again in the view to stop it from rotating.
	Alt + middle mouse button	To temporarily activate **Mouse-Orbit Camera**, hold down the Alt key and then click and drag using the middle mouse button. When the Alt key and middle mouse button are released, whatever tool was previously in use will still be active.

	Hotkey	Description
🖑	Alt + P	**Mouse-Pan Camera** lets you move the camera up, down, left and right using the mouse. The camera's position changes, but its direction does not.
↕	Alt + D	**Mouse-Dolly Camera** lets you move the camera forward and backward by moving mouse up and down. Move the mouse left or right to rotate the camera side to side.
🖘	Alt + T	**Mouse-Tilt Camera** lets you move the mouse to tilt the camera in any direction while staying in the same location.
🡕		**3D Center Camera on Point** lets you focus the camera at a particular point in the scene. This changes the camera's direction and focal point, but not its position. To use the **3D Center** tool, activate the tool and then click on any object in the scene.
🡕	Z	**3D Focus on Object** lets you focus the camera on a specific object. This changes the camera's position, direction, focal point, and the length of its line of sight. To use the **3D Center** tool, activate the tool and then click on any object in the scene.

Move Camera with Keyboard

An active camera's position can be changed using the Arrow keys on your keyboard. **Select 3D> Move Camera with Keyboard** to access the Move Camera with Keyboard modes.These modes are not available in Cross Section/Elevation views.

These modes use the **Incremental Move Distance** and **Incremental Rotate Angle** set in the active 3D view's **Camera Specification** dialog.

• **Keyboard-Orbit Camera** lets you use the keyboard to rotate the camera around the focal point. The camera's position and direction both change.

• **Keyboard-Pan Camera** lets you move the camera up, down, right, and left using the keyboard. The camera's position changes, but its direction does not.

• **Keyboard-Dolly Camera** lets you move the camera forward and back using the Up and Down Arrow keys, and rotate side to side using the Left and Right keys**.**

• **Keyboard-Tilt Camera** lets you use the Arrow keys to tilt the camera up, down, or side to side to change the focal point. The camera's direction changes, but its position does not.

Move Camera Tools

Select **3D> Move Camera** in a 3D view to access these tools. These tools change the active camera's position, but not its direction and are not available in Cross Section/ Elevation views.

These tools use the **Incremental Move Distance** set in the active 3D view's **Camera Specification** dialog.

	Hotkey	Description
	F	**Move Camera Forward** moves the camera and its focal point forward.
	B	**Move Camera Back** moves the camera and the focal point back.
⬅	L	**Move Camera Left** moves the camera and the focal point to the left in a line perpendicular to the line of sight.
➡	R	**Move Camera Right** moves the camera and the focal point to the right in a line perpendicular to the line of sight.
⬆	U	**Move Camera Up** moves the camera and the focal point up.
⬇	D	**Move Camera Down** moves the camera and the focal point down.

Orbit Camera Tools

Select **3D> Orbit Camera** in a 3D view to access these tools. Orbiting the camera rotates it about the focal point using the **Incremental Rotate Angle** set in the active view's **Camera Specification** dialog.

These tools are not available in Cross Section/Elevation views.

	Hotkey	Description
⬆	I	**Move Camera In** moves the camera closer to the focal point along the line of sight. The camera cannot move past the focal point using this tool.
⬇	O	**Move Camera Out** moves the camera away from the focal point along the line of sight.

	Hotkey	Description
		Orbit Camera Upward rotates the camera up about the focal point. The camera cannot rotate past a vertical line looking straight down on the focal point.
		Orbit Camera Downward rotates the camera down about the focal point. The camera cannot rotate past a vertical line looking straight up at the focal point.
		Orbit Camera Left rotates the camera to the left about the focal point.
		Orbit Camera Right rotates the camera to the right about the focal point.

Tilt Camera Tools

Select **3D> Tilt Camera** to access these tools. Tilting keeps the camera in one place and pivots the camera about its vertical or horizontal axis. This movement uses the **Incremental Rotate Angle** set in the active view's **Camera Specification** dialog and is similar to tilting your head up and down or turning it side-to-side.

These tools are not available in Cross Section/Elevation views.

	Hotkey	Description
		Tilt Camera Upward tilts the camera up while keeping it in the same location. The camera cannot tilt beyond the vertical position.
		Tilt Camera Downward tilts the camera down while keeping it in the same location. The camera cannot tilt beyond the vertical position.
		Turn Camera Left turns the camera to the left while staying in the same location.
		Turn Camera Right turns the camera to the right while staying in the same location.

View Direction Tools

The **View Direction Tools** allow you to view the model from a specific direction in a camera view, overview, or cross section/elevation view. While one of these views is active, select **3D> View Direction** to access these tools.

	Description
	Front View creates a front view of the model.
	Back View creates a back view of the model.

	Description
	Top View creates a top view of the model.
	Bottom View creates a bottom view of the model.
	Left Side View create a left side view of the model.
	Right Side View create a right side view of the model.
	Restore Original View restores the original view position.

Editing 3D Views

In addition to its position and direction, there are other ways to modify a 3D view.

In the Specification Dialog

You can make adjustments to a camera in the **Camera Specification** dialog. This dialog is particularly helpful for making fine adjustments to the camera's position, appearance, and other attributes. See "Camera Specification Dialog" on page 64.

> Tile a 3D view and the floor plan view and use the camera movement tools to see how they affect the camera. See "Tiling Views" on page 34.

Using the Edit Tools

A camera symbol or symbols selected in floor plan view can be edited in a variety of ways using the buttons on the edit toolbar. See "The Edit Toolbar" on page 12.

The **Copy/Paste** and **Copy and Paste in Place** edit tools will be available for a selected camera or overview. They are not, however, available for levation views. See "Copying and Pasting Objects" on page 75.

Using the Edit Handles

Return to floor plan view without closing the 3D view. See "Working in Multiple Views" on page 34.

Using the **Select Objects** ⟨⟩ tool, select the camera object. When a camera symbol is selected it displays four edit handles.
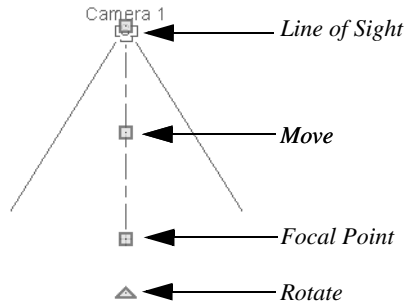
- Drag the **Line of Sight** handle to change the camera angle without moving the focal point.
- Drag the **Move** handle to relocate the camera while maintaining its relative angle.
- Drag the **Focal Point** handle to reposition the focal point and change the line of sight without moving the camera.
- Drag the **Rotate** handle to rotate the camera's line of sight about its center.

The 3D view corresponding to the camera symbol reflects changes made to the symbol in floor plan view.

Multiple camera symbols can be selected; however, their editing options are limited to being moved, rotated, and deleted.

Using the Contextual Menu

In a 3D view, right-click in an empty space in which the backdrop or background color displays to access the contextual menu. See "Contextual Menus" on page 13.
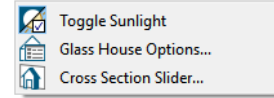
- In Vector Views, the options are a selection of commonly used commands from the File, Edit, Tools and Window menus.
- In the other Rendering Techniques, the options are a selection of tools and toggles specific to the current view.

Up One Floor/Down One Floor

You can move a camera to a different floor. While the camera view is active, select **Tools> Reference Floors> Up One Floor** ⌃ or **Down One Floor** ⌄. Note that this may affect what is seen in the view as well as its display in floor plan view. See "In Floor Plan View" on page 53.

The position and movement of a camera is affected by its location within the model. When the camera is outside a building, its height is relative to the terrain and follows the terrain as it is moved. When inside a building, the camera height is relative to the floor of the room it is drawn in.

If the camera is on an upper floor and you move the camera outside of the building, the camera remains at the same height relative to the floor it was created on.

Zooming

The **Zoom Tools** are available in all 3D views. See "Zoom Tools" on page 37.

Selecting **Window> Zoom In** ⊕, **Zoom Out** ⊖ or **Fill Window** ⤢ does not change

the camera's location or field of view. Instead, the extents of the view are expanded or cropped.

Field of View

The **Field of View** refers to a camera's field of vision. A wider field of view makes the focal point appear further away, as more of the image is included in the same view window.

In floor plan view, the angled lines of a camera symbol indicate its field of view.

FOV Indicators
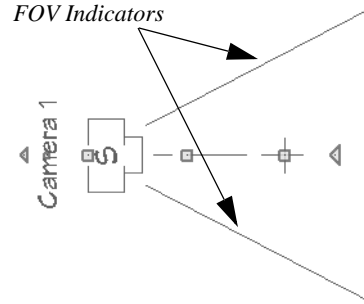
A camera's field of view can be adjusted in the **Camera Specification** dialog. See .

Cross Section Slider

 Select **3D> Camera View Options> Cross Section Slider** when a camera view or overview is active to open the **Cross Section Slider** dialog.

Note: The Cross Section Slider is not available when the Vector View Rendering Technique is used. See "Rendering Techniques" on page 68.
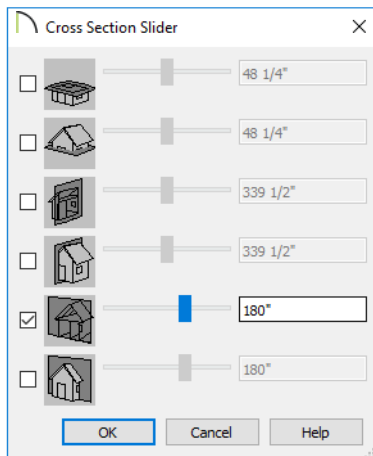
To use the Cross Section Slider

1. Check the box beside a cross section cutting plane to select it and make its Position slider and text box active.

2. Move the Position slider to adjust the position of the cutting plane.

- The cutting plane Position is measured from the edge of the model that is cut first by the selected cutting plane.
- Position the Cutting Plane with accuracy using the text field to the right of the slider.

3. Repeat steps 1-3 to use additional cutting planes if you wish.

4. Click **OK** to close the dialog.

Saving and Printing 3D Views

3D camera views, overviews and cross section/elevation views can be saved with the plan in which they are created, exported and saved as image files, as well as printed.

Saving 3D Views

Select **3D> Save Active Camera** to save the current camera in the plan. You can also save a camera view by checking the **Saved** box in the **Camera Specification** dialog. See "Camera Specification Dialog" on page 64.

In addition, if Text objects are drawn in a cross section/elevation view, you will be prompted to save the view when you close it. Any Text objects added to a cross section/ elevation view are saved with the view as part of the plan file.

Activating Saved Views

There are three ways to open a saved 3D view:

- Select the camera symbol in floor plan view and click the **Open View** edit button.

- Double-click the camera symbol using the **Select Objects** tool.
- Right-click on it and select **Open View** from the contextual menu.

Unsaved cameras that are open in another view window can also be activated using the **Open View** edit button.

If you open a saved camera view and then modify its location or direction using any of the tools available in that view, the program will confirm whether you want to re-save the camera using these new settings when you close it. See "Repositioning Cameras" on page 55.

Exporting 3D Views

All 3D views can be exported and saved as .bmp, .jpg, .png, or .tif files. Select **File> Export> Picture** to save the current screen image as an image file. See "To export a picture" on page 86.

In addition, Vector Views can be exported and saved as **.emf** files. See "Metafiles" on page 86.

Once saved, a picture can be opened and converted into many other formats using a graphics program.

Printing 3D Views

Since all 3D views other than Vector Views are created using pixels instead of lines, **File> Print> Print Image** must be used when printing. **Print Image** is a special

Chief Architect Viewer function that prints the screen in picture format.

Closing 3D Views

Although you can have any number of 3D views open at a time, to conserve resources on your computer it is a good idea to close views when you no longer need them. There are a number of different ways to do this. See "Closing Views and Files" on page 39.

Camera Specification Dialog

The **Camera Specification** dialog can be accessed in floor plan view by selecting camera symbol and clicking the **Open Object** edit button. See "In Floor Plan View" on page 53.

This dialog can also be accessed while a camera view or overview is active by selecting **3D> Edit Active Camera** .

The selected view's specific type is indicated in the dialog's title bar: the specification dialog for a **Full Camera** , for example, is named **Full Camera Specification**.

Camera Panel

① General -

- Specify the **Name** that displays in the camera label in floor plan view.

- Check **Show Shadows** to turn on shadows in the selected camera view. When unchecked, shadows are not generated.

- Check **Ray Casted Sun Shadows** for higher quality shadows cast by sun light. Ray Casted Sun Shadows take longer to generate than regular shadows and only refresh when the camera is not moving.

- Check **Edge Smoothing When Idle** to apply high quality edge smoothing to edge lines when the selected camera is not in motion. See "Edge Smoothing" on page 68.

- Select the amount of **Ambient Occlusion** to use using the slider bar or text field. Ambient Occlusion allows variation in the strength of the ambient light. It is more realistic than uniform ambient light, but takes longer to render. Only affects Standard renderings.

② The **Lighing** settings control how many and which light sources are used in the current view.

③ The **Positioning** settings determine the position and orientation of the camera. See "Repositioning Cameras" on page 55.

- The **Height Above Floor** defines the height that the camera is above the floor level for the current floor. See "Camera Height" on page 51.

- The **Tilt Angle** determines the vertical angle that the camera is tilted. The camera maintains its focal point and position in floor plan view, but if the camera is tilted, the focal point is above or below the current camera height.

To change a setting below, first uncheck Default.

- The **Incremental Move Distance** controls how far the camera moves each time you Pan in any direction or Dolly forwards or backward using the keyboard, toolbar buttons, or menu. For interior views a small number is good, but for exterior you may want a larger increment.

- The **Incremental Rotate Angle** defines how many degrees the camera rotates each time you Tilt, Orbit, or Dolly side to side using the keyboard, toolbar buttons, or menu. A setting of 90° would make one full rotation in four moves.

- The **Field of View** defines the camera's field of vision in angular degrees. See "Field of View" on page 62.

TODO

> You can increase a camera's Field of View when the view is active by pressing the W key, or decrease the Field of View by pressing the N key.

4 **Options** -

- **Clip Surfaces Within** - Objects located within this distance from the camera do not display in the view. Decrease this value to display objects located very close to the camera; increase it to improve the appearance of some surfaces in Overview cameras with very large extents.
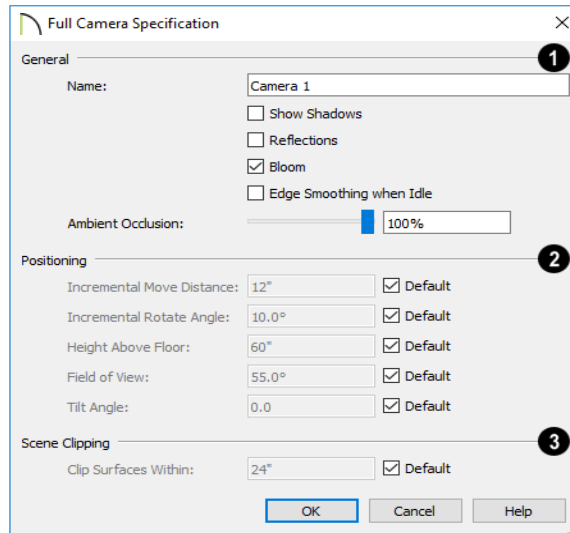
3D Rendering

There are a variety of tools available to create 3D views of a model: simply click a button to create an overview, or click and drag to create a camera or cross section/ elevation view. See "3D Views" on page 47.

To improve the quality of the rendering and create a custom look, you can choose from several rendering techniques .

Chapter Contents

- Rendering Effects
- Rendering Techniques
- Speeding up 3D View Generation

Rendering Effects

There are a variety of factors which affect the appearance and quality of rendered 3D views. These options may also affect program performance.

Shadows

Shadows have an important effect on image quality.Shadows are enabled in Full and Floorcamera views by default. You can, however, check or uncheck **Show Shadows** in the defaults dialog for any camera tool or in the. In addition, you can select **3D> Camera View Options> Toggle Shadows** in any camera view. See "Camera Panel" on page 65.

Edge Smoothing

Angled surface edges will sometimes display on screen as jagged or stair-stepped. Edge Smoothing softens this effect, producing cleaner lines.

High quality Edge Smoothing can be produced by checking **Edge Smoothing When Idle** in the **Camera Specification** dialog. This setting does not affect a camera while its position or orientation are being changed, but applies additional smoothing to edge lines when the camera is not in motion. See "Camera Specification Dialog" on page 64.

This high quality Edge Smoothing option is view-specific and can also be toggled on or off by selecting **3D> Camera View Options> Toggle Edge Smoothing When Idle**.

Rendering Techniques

Any camera view, cross section/ elevation view, or overview can be generated using one of several Rendering Techniques to produce views for a range of different purposes. When a 3D view is active, select **3D> Rendering Techniques** to access these tools.

Standard Rendering

Standard rendering is a photo-realistic technique that represents materials using textures, models lighting, and can also display shadows. Surface edge lines are not drawn and no special colors or effects are applied.

In floor plan view, the camera symbol for a view using the **Standard** technique displays an S in its center. See "Displaying 3D

Vector View

In Vector Views, surface edge lines are drawn and pattern lines and colors are used to represent materials while textures are not. Shadows are supported, and when in use a single light source is used to produce them. Shading Contrast can be applied to surfaces, but other special colors or effects are not.
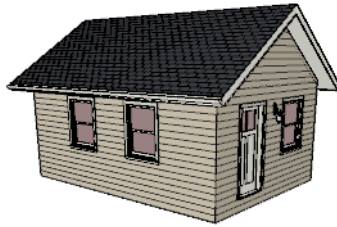
In floor plan view, the camera symbol for a view using the **Vector View** technique displays a V in its center.

Glass House

Glass House rendering uses different shades of a single color to display the model with surface edge lines and semi-transparent surfaces. Lighting and shadows are not modeled, and materials are not represented, so neither pattern lines nor textures are used.
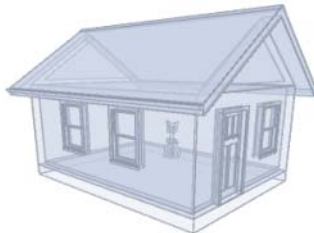
In floor plan view, the camera symbol for a view using the **Glass House** technique displays a G in its center.

Physically Based

Physically Based rendering is similar to the photo-realistic Standard technique: it represents materials using textures, does not draw surface edge lines, models lighting, and can display shadows.

Physically Based rendering models material properties and light propagation more accurately than other rendering techniques and is best used when a focus on lighting and finish materials is the goal.

In floor plan view, the camera symbol for a view using the **Physically Based** technique displays a Ph in its center.

Glass House Options

You can modify the appearance of Glass House Views by selecting **3D> Rendering Techniques> Glass House Options**.
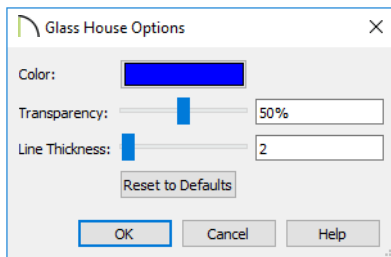
- Click the **Color** bar to select a color for the semi-transparent surfaces and lines in

a Glass House view. See "Color Chooser Dialog" on page 17.

- Click **Reset to Defaults** to restore the default settings used when the Glass House view was first created.

Speeding up 3D View Generation

When you have a large, complex model with a lot of detail, it may take some time to generate a 3D view of everything in the model. During this process, progress information may display in the Status Bar and in a message window.

There are several ways to speed up the generation time of views.

Turn Off Layers

The display of objects in 3D views can be turned on or off in the **Display Options** dialog. Turning off unneeded layers in 3D views can speed up 3D view generation time. See "Layer Display Options Dialog" on page 42.

Rendering Preferences

In the **Preferences** dialog, there are a number of settings that you can use to balance rendering quality and generation time. See "Render Panel" on page 61.

Halt Generation with Esc Key

In a large, complex model, repositioning the camera can be time-consuming. You can speed up this process using the Esc key. When you press the Esc key, the modeling process is interrupted and the view is displayed "as is". Then, press the F5 key to refresh the display.

Text

Text is an simple and effective way to communicate your thoughts and suggestions regarding a drawing. Text can be added in floor plan and cross section/elevation views, and to layout pages.

Text lines with arrow can be attached to text objects, allowing you to direct attention to specific plan details.

Chapter Contents

Missing Fonts

If you open a plan or layout file that uses a font that is not installed on the current computer, the program will give you an opportunity to replace it in the **Replace Fonts** dialog.
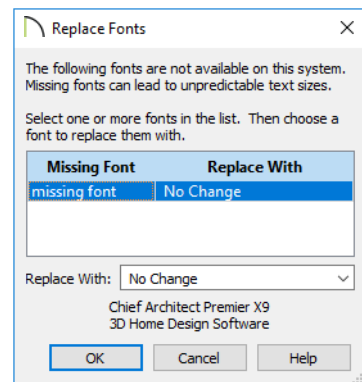
The table lists all missing fonts and how they will be replaced.

• Click on a font name in the list to select it. Use the Shift or Ctrl key to select multiple fonts. See "Shift and Ctrl Select" on page 83.

• Select a replacement font from the **Replace With** drop-down list, or leave "No Change" as the selection to maintain the file's association with the missing fonts.

• A preview of the selected font displays below the **Replace Width** list.

If you do not plan to return the file to the computer where it was created, you may want to replace missing fonts with the fonts you normally use. On the other hand, if you do intend to return the file, you may prefer to not replace any missing fonts.

Creating Text

Text can be created in floor plan view, in cross section/elevation views, and on layout pages.

Once created, text can be selected and edited in a variety of ways. See "Editing Text" on page 77.

To create Text

1. Select **Tools> Text** .

2. Click in the drawing area, and the **Rich Text Specification** dialog will open. See "Rich Text Specification Dialog" on page 73.

3. Type or paste the desired text into the Text Field.

4. Use the options in the dialog to change the font, style and size of any portion of the text.

5. When you are finished, click OK. The **Text** tool remains active, so you can create additional text objects if you wish.

You can also create lines with arrows connecting the text that you create to items in the drawing. See "Text Arrows" on page 80.

Displaying Text

As with other types of objects, the display of Text objects is controlled in the **Layer Display Options** dialog.   See "Layer Display Options Dialog" on page 42.

Text objects can only be displayed in views where text can be created.

The display attributes of each individual text object can be controlled independent of the layer it is placed on. See "Rich Text Specification Dialog" on page 73.

The display attributes of individual text objects, such as color and size, can be set in their specification dialogs. See "Rich Text

Specification Dialog" on page 73 and "Line/Polyline Specification Dialog" on page 81.

Rich Text Specification Dialog

The **Rich Text Specification** dialog opens if you select the **Text** tool and then click once in the drawing area.

You can also open this dialog by selecting a **Text** object, then clicking the **Open Object** edit button.

Arrow Lines have their own specification dialog. See "Line/Polyline Specification Dialog" on page 81.

Text Panel

The settings on the TEXT panel allow you to type the selected Text object's content and control many aspects of its appearance, including its font, size, color and style.

You can specify the appearance of the text before typing, and can also select and change the attributes of all or portions of the text content after it is typed. To change text that already exists, simply highlight it using the

mouse and/or the Shift + arrow keys and then make any needed changes to its attributes.

Note: If you do not type anything in the text field on this panel when creating a new object, no object will be created when you click OK. On the other hand, if you remove the text from an existing object and click OK, an empty text box will result.
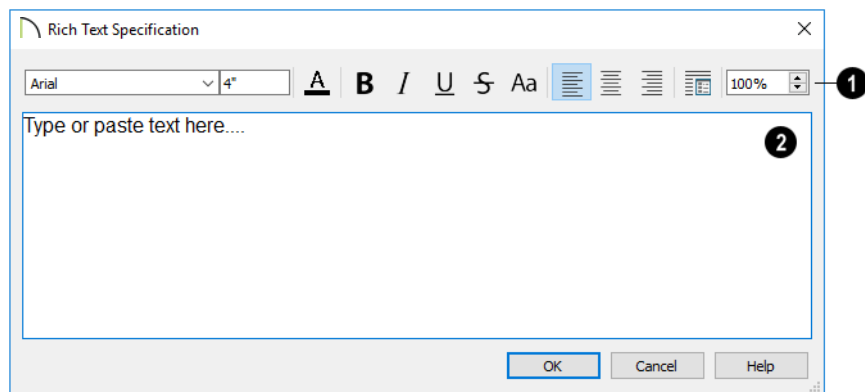
1 Use the options on the Edit Bar, which displays above the Text Entry field, to change the font, size, and style of the text.

Select the desired options before typing to affect the text as it is typed, or select some or all of the text and then specify which options to apply to it.

- Select a **Font** from the drop-down list.

- Specify the **Text Size** in drawing units.

- Click the **Color** ![A] button to specify the color of the selected or subsequently typed text. See "Select Color Dialog" on page 44.

- Click the **Bold** ![B] button to specify the selected text as bold.

- Click the **Italic** ![I] button to specify the selected text as italic.

- Click the **Underline** ![U] button to specify the selected text as underlined.

- Click the **Strikethrough** ![S] button to specify the selected text as stricken-through.

- Click the **Uppercase** ![Aa] button to display the selected text in all capital letters.

- Click the **Align Left** ![icon], **Align Center** ![icon], or **Align Right** ![icon] button to specify the how text is aligned.

- Click the **Paragraph Options** ![icon] button to specify the selected paragraph's alignment, spacing and bullets or numbering in the **Paragraph Options** dialog.

- Specify the **Zoom** factor of the selected text by typing a percentage value in the text field or clicking the up/down arrows. This setting only affects the text as it appears in this dialog.

Note: Some fonts cannot be drawn at certain zoom factors. When this is the case, the appearance of the text will not change.

2 Type or paste text in the Text Entry field. See "Copy, Cut and Paste" on page 79.

- Right-click in the Text Entry field to access a contextual menu from which you can select Undo, Redo, Cut, Copy, Paste and Select All. See "Contextual Menus" on page 13.

- To edit text in the entry field, click and drag to highlight any portion of it and then use the tools on the Edit Bar as needed.

Paragraph Options Dialog

Alignment ①
- ● Left
- ○ Center
- ○ Right
- ○ Justified

Line Spacing ②
- ● Single
- ○ 1.5 Lines
- ○ Double
- ○ User Specified Line Height:
  - 100.0%

Margins ③
- Left: 0"
- Right: 0"
- Indent: 0"

Bullets ④
- Type: None
- Number Prefix:
- Number Suffix:

OK   Cancel   Help
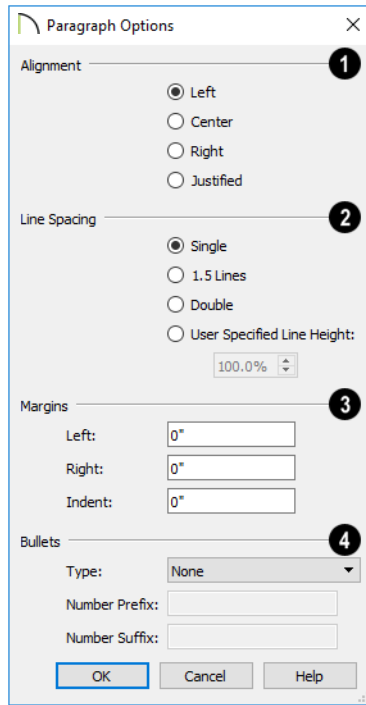
① Specify the **Alignment** of the selected paragraph(s).

② Specify the **Line Spacing** of the selected paragraph(s).

- Click the radio button beside **Single**, **1.5 Lines**, **Double** or **User Specified**.

- If you select **User Specified Line Height**, type the desired height for each line of text in the selected paragraph(s). For best results, this value should be at least as much as the largest character size used in the selected paragraph(s).

③ Specify the appearance of the side **Margins** of the selected paragraph(s), as measured in from edges of the text box. Only positive Margin values can be used.

- Specify the **Indent**, which is measured from the left side margin. A negative value can be used if a left Margin has been specified.

④ Specify the appearance of **Bullets** and numbering in the selected paragraph(s).

- Select the desired bullet, numbered, or lettered **Type** from the drop-down list.

- Specify the **Number Prefix**, which are any characters that you would like to display before the selected paragraph's number or letter. Does not affect paragraphs using circle or square bullets.

- Specify the **Number Suffix**, which are any characters that you would like to display after the selected paragraph's number or letter and before its actual text. Does not affect paragraphs using circle or square bullets.

Text Specification Dialog

The **Text Specification** dialog opens if you select a simple **Text** object and click the **Open Object** edit button.

Text Panel

The settings on the TEXT panel allow you to type the selected Text object's content.
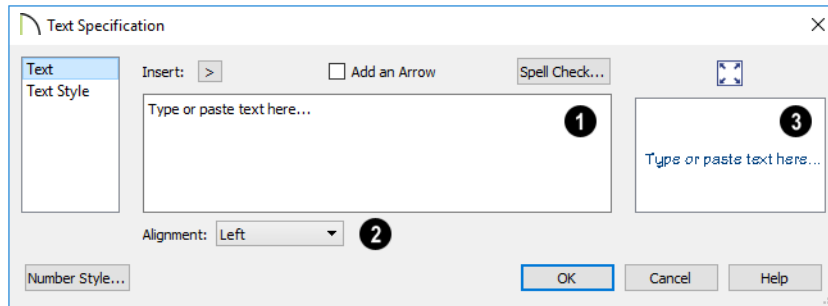
1 Enter text in the **Text Entry** field.

2 Select an **Alignment** option from the drop-down list to apply to the text.

3 A preview of the selected text object displays on the right.

Text Style Panel
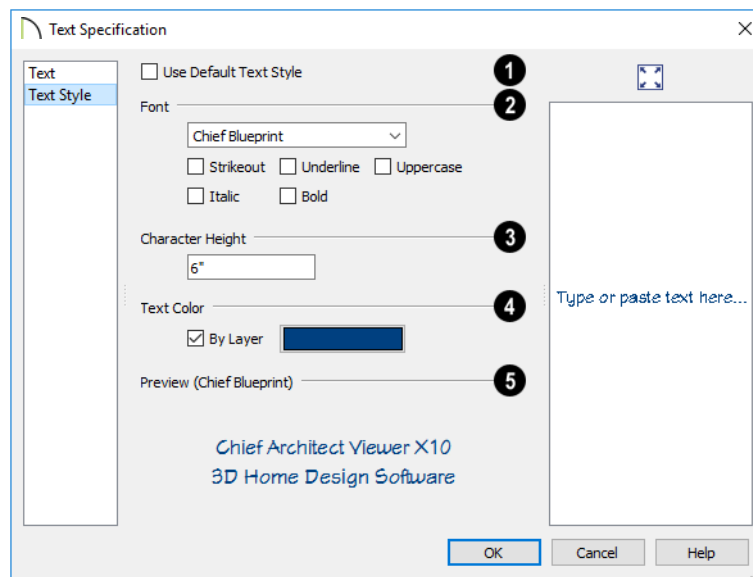
1 Uncheck **Use Default Text Style** to enable the settings that follow. When it is checked, information about the Text Style that is assigned to the selected object displays for reference.

2 Specify the attributes of the selected Text Style's **Font**.

- Select a font from the drop-down list.

- The text styles **Bold**, **Underline**, **Italic**, **Strikeout**, and **Uppercase** are available. Check any of the boxes to apply that style.

3 Specify the **Size** of text using the selected Text Style.

- Enter the **Character Height** in drawing units. This height is subject to the current drawing scale. When imperial Inches or Feet and Inches are used, accuracy to 1/128" is possible.

4 Specify the selected Text Style's **Text Color**. When Use Custom Text Style is not selected above, a Text Color does not display here for reference.

- When **By Layer** is checked, text uses the line color assigned to the layer it is located on. See "Layers" on page 41.

- Uncheck **By Layer**, then click the **Color** bar to select a different color. See "Select Color Dialog" on page 44.

5 A preview of the Text Style currently assigned to the selected object displays here.

6 A preview of the selected text object displays here.

Editing Text

Once created, **Text** objects and **Arrow Lines** can be selected and edited using the edit handles the edit toolbar buttons, and their specification dialogs. See "Rich Text Specification Dialog" on page 73.

To select a **Text** object or **Arrow Line** , click on it using either the tool used to create it or the **Select Objects** tool.

Sometimes, multiple **Text** objects or **Arrow Lines** are located close to one another, making it difficult to select a particular object. Click as close as you can to the desired object, then click the **Select Next Object** edit button or press the Tab key until the object is selected.

Editing Text Attributes

Most text attributes, including the font, size, style, and the content itself, are edited in the **Rich Text Specification** dialog.

In order to edit the attributes of an existing **Text** object, you must select some or all of the text before making changes. See "Text Panel" on page 73.

To edit Text attributes

1. Select a **Text** object and click the **Open Object** edit button.

2. On the TEXT panel of the **Rich Text Specification** dialog, click and drag to select some or all of the text typed into the Text field.
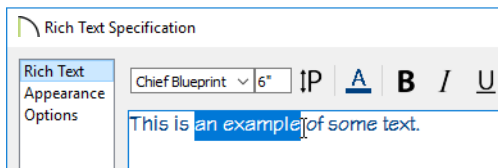
3. With some or all of the text selected, change any of the attributes available along the top of the panel, including the font, size, color, and style.
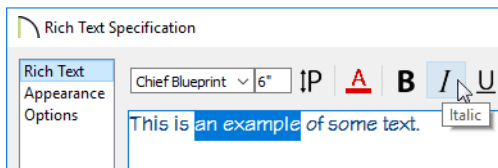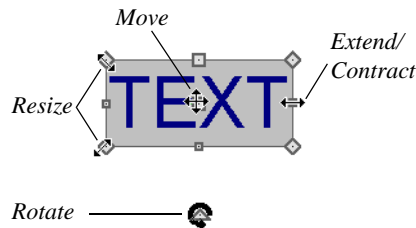

4. As changes are made, the selected text updates. Only the selected text is modified.
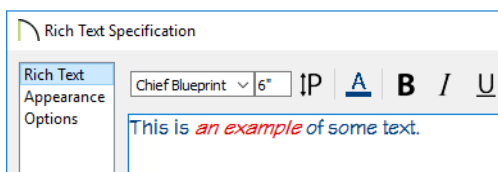

Using the Mouse

When a **Text** object or **Arrow Line** is selected, it displays edit handles. Use the edit handles to resize, extend/contract, move, and rotate the selected object.

As a text box's width is made narrower or wider using an edit handle, its height may increase or decrease so that none of the text becomes hidden. The opposite is not true, however: a text box's height cannot be resized smaller than the height of the rows of text it currently contains.

Arrow Lines can also be connected to form polylines that can be reshaped using the edit handles.
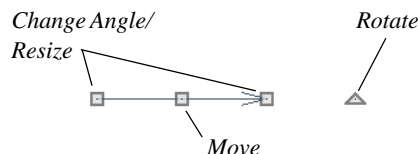
Using the Edit Tools

A selected **Text** object or **Arrow Line** can be copied or deleted using the edit toolbar buttons.

To copy and paste an object

1. Click on the text or arrow line to select it.

2. Click the **Copy/Paste** edit button.

3. Click anywhere in the drawing area to paste the copy at that location.

To make multiple copies, click the **Sticky Mode** ![pin icon] edit button before clicking in the drawing area. With **Sticky Mode** enabled, you can continue to click to paste as many copies of the object as needed.

When you are finished, click the **Main Edit Mode** ![icon] edit button or select another tool.

You can also **Cut** ![icon], **Copy** ![icon], and **Paste** ![icon] a selected object by selecting these options from the **Edit** menu. These are the same as the standard Windows commands.

To delete an object, select it and click the **Delete** ![icon] edit button or press the Delete key on your keyboard.

Resizing Text

The character height of **Text** ![T icon] objects can be specified in their specification dialogs.

Aligning Text

The text content of a text object can be aligned to the left, right, center or justified in the **Rich Text Specification** dialog. See "Text Panel" on page 73.

Copy, Cut and Paste

Copy, Cut and Paste of text into and out of the **Rich Text Specification** dialog can be accomplished using keyboard hotkeys:

- Press Ctrl + X to Cut the selected text and save it to the system clipboard.

- Press Ctrl + C to Copy the selected text and copy it to the system clipboard.

- Press Ctrl + V to paste your last cut or copied selection in a new text object.

Copy, Cut and Paste use the system clipboard, making it possible to to transfer text between text objects, between Chief Architect Viewer files, from a plan or layout into another application, or vice versa.

Copying and Pasting Text

The Copy, Cut and Paste commands use the system clipboard, making it possible to transfer text between text objects, between Chief Architect Viewer files, from a plan or layout into another application such as a text editor or spreadsheet program, or vice versa.

Cut, Copy, and Paste can also be accessed from the Edit menu of many applications, including Chief Architect Viewer. These menu commands are not available when the text specification dialogs are open, but you can use the associated hotkeys.

To Copy, Cut and Paste text

1. On the TEXT panel of either text specification dialog or in another program altogether, highlight the text you wish to cut, copy or paste.

2. Press Ctrl + X to **Cut** the selected text out of its original location and save it to the system clipboard.

3. Press Ctrl + C to **Copy** the selected text to the system clipboard without removing it from its original location.

4. Open the text object or a file in another application and click to place your cursor in the Text field, writing area, or spreadsheet cell.

5. Press Ctrl + V to **Paste** the copied text at the location of your cursor.

Bear in mind that when text is copied and pasted, its formatting is not always retained. The results depend on the program or type of text object in which the content was created as well as the type of text object into which it is pasted.

Pasting into Rich Text

Text pasted into a **Rich Text** object from another source will retain most - but not necessarily all - of its custom

formatting. If a line of text is sufficiently long, however, it may be wrapped automatically when pasted into Rich Text.

Text pasted into a **RichText** object from a spreadsheet program retains basic column and row information. Column width cannot be adjusted; however, as you add or remove text from a cell, row height will increase or decrease to accommodate your changes.

Pasting into a View

Text can also be pasted directly into a plan viewelevation view. When you use the Paste command, a new Rich Text object is created, the text is pasted into that object, and it is selected. In order to see the new object, you may need to Fill Window.

Text Arrows

Text arrows can be used to connect text objects to details of interest in your drawing.

Text arrows can be snapped together to form open or closed polylines. If two lines with arrows meet within the bounding box of a text object, however, they will not join. This allows you to attach multiple, separate text arrows to a single text object.

Lines with arrows can be independent or attached to other objects. If an attached object is moved, the end of the Arrow Line will move, as well. Arrows attach to closed polyline-based objects along their edges, but can attach to Text or an architectural object anywhere within its bounding box in floor plan view.

If an arrow is attached to text or another object, deleting either the text or the object will also delete the arrow.

Arrow Line

Arrow Lines can be attached to text and architectural objects by selecting **Tools> Arrow Line** and then clicking and dragging to draw a line. There is no limit to the number of text lines with arrows that can be attached to an object.

The endpoints of **Arrow Lines** can be joined to form polylines with corners that can be adjusted using the edit handles.

Auto Position Arrows

The following image illustrates the behavior of Auto Positioning. When the head of the arrow line is moved, the tail of the arrow snaps to different Auto Position locations on the text object, maintaining its connection.
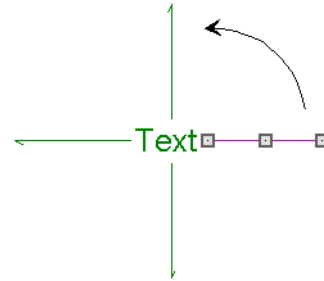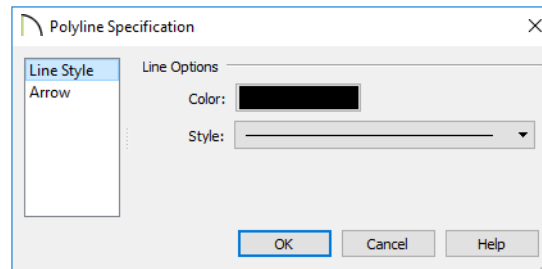
Line/Polyline Specification Dialog

Select an Arrow Line and click the **Open Object** edit button to open the **Line Specification** dialog or the **Polyline** **Specification** dialog (if the object is composed of multiple line segments).

Line Style Panel

The LINE STYLE panel allows you to control the line color and style of the selected line or polyline.

- Click the Color bar to select the **Color** of the selected object's line(s). See "Select Color Dialog" on page 44.

- Click the **Style** drop-down lis t to select a line style used to display the selected object.

An additional **Display Options** setting is available In the **Picture File** and **Metafile Box Specification** dialogs. See "Pictures, Metafiles, and Walkthroughs" on page 85.

- Check **Show Outline** to display the selected object's border polyline.

Arrow Panel

The ARROW panel is available for lines and open polylines, but not for closed polylines.
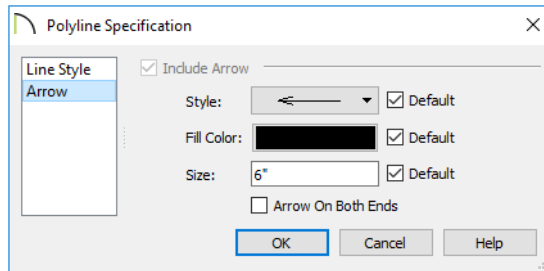
- Select an arrowhead **Style** from the drop-down list. Check **Default** to reset the arrow type.

- Select the **Fill Color** used to fill the arrowheads. Check **Default** to reset the fill color. See "Select Color Dialog" on page 44.

- Define a **Size** for the arrow(s). Check **Default** to reset the size.

- Check **Arrow on Both Ends** to place an arrow on both ends of the selected line or polyline.

Fill Style Panel

The FILL STYLE panel is available for closed polylines, but not for open polylines.
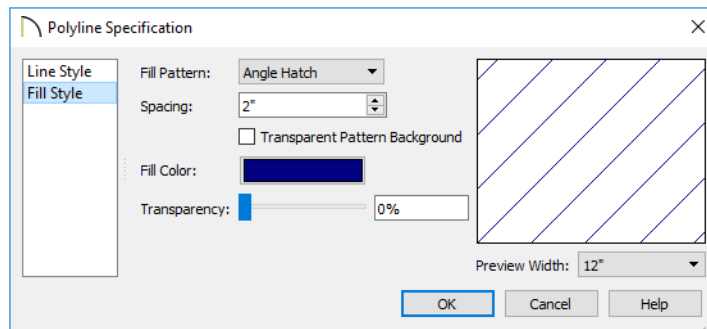
- Choose a **Fill Pattern** from the drop-down list. The options that follow are disabled if "None" is selected.

- Define the **Spacing** for the selected fill pattern.

- Check **Transparent Pattern Background** to make the fill pattern transpar-

ent. When you check this option, any objects behind the fill pattern are visible through it.

- **Fill Pattern Color** - Select a line color or fill color if a solid fill is specified. This overrides the layer color. See "Select Color Dialog" on page 44.

- Use the **Transparency** slider bar or text field to control how transparent the fill pattern lines are. This setting also affects Solid fill colors.

A preview of the selected pattern displays on the right. As changes are made to the settings on this panel, the preview will update.

- Choose a **Preview Width** from the drop-down list. This value controls how large an area the preview represents. The selected value indicates the length of each side of the preview in actual plan inches (mm).

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Pictures, Metafiles, and Walkthroughs

You can save any view using a variety of picture file formats. In addition, Chief Architect Viewer allows you to create virtual tours that can be saved as .**avi** files, shared with others, and played back later.

You can save any 2D or 3D view using a variety of picture file formats that can be opened in other applications.

In addition, if your design professional provided you with one, you can view a 3D walkthrough, which is a video tour of a model.

Chapter Contents

Pictures

There are several ways to save a picture of a view in Chief Architect Viewer:

Using the **Export Picture** tool is similar to creating a screen capture of everything in the current view window. Pictures can be saved in various file formats and used in other applications.

Export Picture is best suited for rendered views. When exporting a line-based view, best results can be achieved by saving it as a Metafile. See "To export a metafile" on page 86.

Use the **Print Image** tool to either print or save the current view as a PDF file. See "Print Image Dialog" on page 95.

To export a picture

1. Open the view that you would like to export as a picture file.

2. Zoom, pan or otherwise adjust the view so that what you see on screen suits your needs. See "Displaying 3D Views" on page 53.

3. Select **File> Export> Export Picture (BMP, JPG, PNG)** to open the **Export Picture File** dialog and give the file to be exported a name, file type, and location. See "Exporting Files" on page 25.

Metafiles

A metafile (**.emf**, **.wmf**) is a special picture file format made up of vectors (lines) that allow the image to be rescaled without loss of quality. High resolution pictures of line-based views can be exported as a metafile.

Note: Metafiles are not supported in Mac operating systems and cannot be exported in Mac versions of the software.

Exporting Metafiles

An enhanced metafile (**.emf**) can be exported from any line-based view: that is, from floor plan view and 3D Vector Views.

Only objects that display on screen are included in an exported metafile.

To export a metafile

1. Accurately position the view on screen.

2. Select **File> Export> Export Metafile (EMF)** .

3. Drag a marquee from corner to corner, defining the area that will included in the metafile.

4. Release the mouse button to open the **Export Metafile** dialog, which is a typical Save As dialog. See "Saving and Exporting Files" on page 23.

5. When you click the Save button, the **Metafile Size** dialog opens.

Metafile Size	×

Enter desired width of your picture: (measured in target document)

Width:	6"
Height:	4 1/8"
DPI:	600
Use Line Weight:	1

OK   Cancel   Help
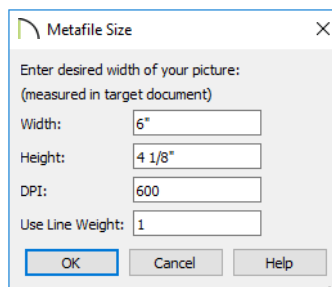
6. Specify the desired **Width** or **Height** of the metafile. When one value is edited, the other changes to maintain its aspect ratio.

Specify, too, the desired **Dots Per Inch (DPI)** for the metafile. A larger value results in a higher quality metafile, but also a larger file size.

7. When a metafile is exported from a 3D Vector View, you can also specify the printed thickness of lines in the view. To increase the printing line weight, type a

larger number in the **Use Line Weight** field. See "Vector View" on page 69.

Metafiles exported from floor plan view

use the line weights defined in the **Layer Display Options** dialog. See "Layer Display Options Dialog" on page 42.

Walkthroughs

A 3D Walkthrough is a series of pictures saved as an **.avi** file that can be played like a video. If your design professional gave you a walkthrough of a model, you can view it using a media player such as Windows Media Player.

To play a walkthrough .avi, begin by copying the file to your computer's hard drive. Then, either:

• Double-click on the .avi file to launch your default media player and view the walkthrough video.

• Launch the media player of your choice and use it to play the walkthrough video.

Chapter 10:

Printing

The Chief Architect Viewer provides a variety of printing options, allowing you to print up to 11" x 17" in size.

The Chief Architect Viewer also allows you to save your drawings in **.pdf** file format that can then be sent to a printing service.

Note: Screen captures are provided for illustrative purposes only and are not an endorsement of any products.

Chapter Contents

Clearing Printer Information

Some information specific to individual printers, such as available paper sizes, is saved with each plan file. You can select

File> Print> Clear Printer Info to clear the printer-specific information stored with the plan file.

The Printing Tools

Select **File> Print** to view the Print Tools submenu.

Print Preview - Shows on screen how the current view will appear printed, based on the current scale and other settings. See "Print Preview" on page 90.

Print - Prints the current floor plan view, Vector View, or layout sheet to a

specified scale. See "Print View Dialog" on page 92.

Print Image - Prints the current view including images, textures, and backdrop. Views printed with Print Image are not scaled. See "Print Image Dialog" on page 95.

Clear Printer Info - Clears the printer information associated with the current page setup.

Print Preview

Print Preview and its related display toggles allow you to get a sense of what the current view will look like when it is printed.

Print Preview

Select **File> Print> Print Preview** for an on-screen representation of how the current view will appear when printed. Print Preview is only available in views that can be scaled.

Objects such as camera symbols that do not print do not display in **Print Preview** .

Text and dimension objects appear on-screen as they will on the printed page.

When **Print Preview** is enabled, color will display depending on whether **Print in Color** is selected in the **Print View** dialog. See "Print View Dialog" on page 92.

Color

The **Color** toggle turns the on-screen display of color on or off in all views.

Printing Across Multiple Pages

When printing directly from a floor plan view, cross section/elevation view, or layout it is possible to print at a scale that does not fit the drawing on one page.

To see on-screen what the drawing will look like when printed, select **File> Print> Print Preview** [icon] and then **Window> Fill Window** [icon]. Grey lines across the drawing sheet indicate where the page breaks will occur. See "Print Preview" on page 90.

To print across multiple pages

1. Select **File> Print> Print Preview** [icon] to display the white rectangle representing the printer paper. See "Print Preview" on page 90.

2. Click the **Select Objects** [icon] button, then click near an edge of the printer paper rectangle to select it.

When selected, the printer paper is highlighted in pale grey and a square Move edit handle displays at its center.

3. Click and drag the Move edit handle to position the printer paper so that the portion of your drawing that you would like to print on your first page is located within the printable area of the page.

4. Select **File> Print> Print** [icon]. In the **Print** dialog, make sure **To Scale** is selected, then click OK. See "Print View Dialog" on page 92.

5. Select the printer paper rectangle and move it so that the desired contents of your second printed page are within the printable area and print **To Scale**.

6. Continue moving the printer paper and printing as needed.

When printing multiple pages, it is generally a good idea to leave some overlap on the edges of each page to make sure that information near those edges is not left off the printed pages by mistake.

Printing to a PDF File

Portable Document Format, or **.pdf** files, are one of the most universally compatible and efficient file formats and can be viewed and printed on most computer platforms.

You can save any view as a **.pdf** file by selecting "Chief Architect Save as PDF" as the Destination printer **Name** in either the **Print View** or **Print Image** dialog. See "Print

View Dialog" on page 92 and "Print Image Dialog" on page 95.

If you have a **.pdf** writer installed on your system, you can use it to create a **.pdf** file instead. To print to **.pdf**, simply select it as the Destination printer **Name** in the **Print View** or **Print Image** dialog.

When you print to **.pdf**, you will be asked to create a file name and choose a destination to save it in the **Save as PDF File** dialog.

Print View Dialog

To print from floor plan view, 3D Vector Views, or layout, select **File> Print> Print**. The **Print View**, or **Print Layout**, dialog opens. The settings that are available will vary depending on which version of the dialog is open.

Note: 3D views that are not Vector Views can be printed using Print Image.
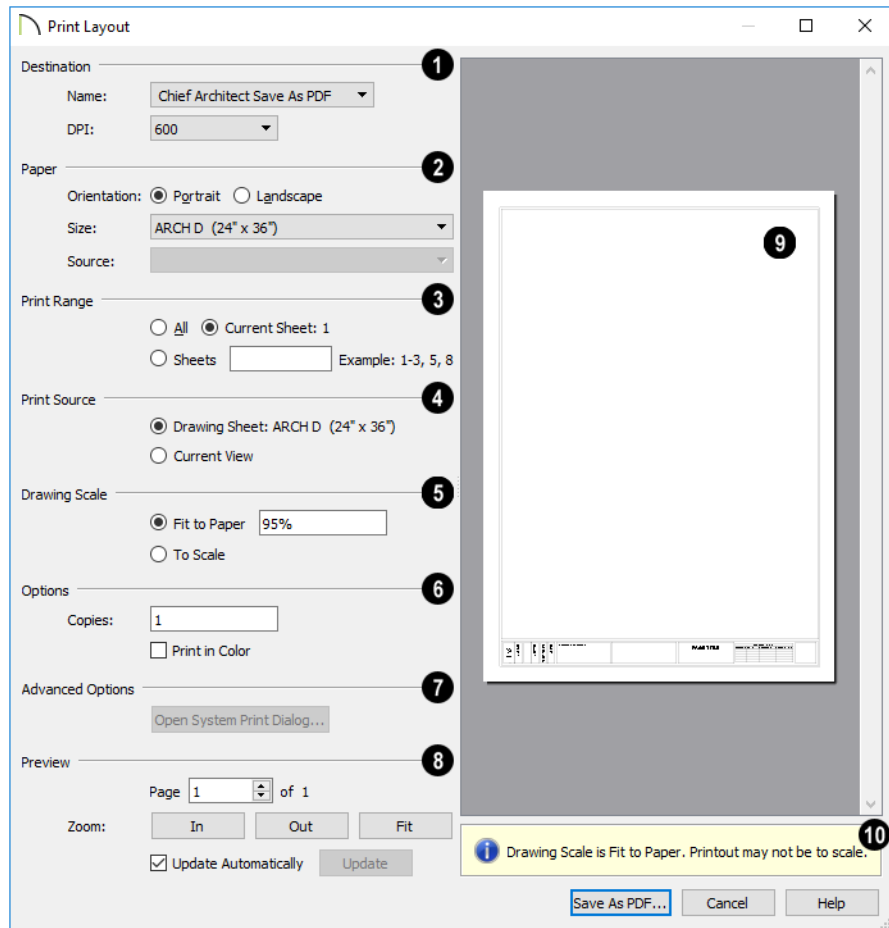
① Select the **Name** of the **Printer** that you would like to use from the drop-down list. To print to **.pdf**, select "Chief Architect Save as PDF" from the list, or choose a **.pdf** writer installed on your system. See "Printing to a PDF File" on page 91.

- Select the **DPI**, or Dots Per Inch to use when printing, from the drop-down list. The available options may vary depending on the selected printer.

② Select the **Paper Orientation**, **Size**, and **Source**. The available Size and Source options are controlled by the selected printer's driver.

- When possible, the program will automatically set the Size and Orientation to match those of the Drawing Sheet.

- The Paper Size may be automatically adjusted if the Drawing Scale option is changed, below.

3 In layout files only, specify the **Print Range**. Only pages that have views or objects drawn directly on them will print.

- Select **All** to print the entire drawing.

- Select **Current Sheet** to print only the currently active layout page.

4 Specify the **Print Source**.

- Select **Drawing Sheet** to print the entire sheet even though you may be zoomed in on a portion of the view.

- Select **Current View** to print only that portion of the active view that is currently visible on screen. If you are zoomed out, any blank space outside of the printable objects in the view is ignored.

5 Specify the **Drawing Scale** of the printed output. Changes to these options may cause the Paper Size to change, above. Not available in camera views or overviews.

- **Fit to Paper** prints the view on one page. The program uses whatever scale is necessary to fit the plan on one page.

- When **Fit to Paper** is selected, specify the percentage of the paper to be used. The default value is 95%.

> Note: The Fit to Paper percentage value is global - affecting all views in all files, and is retained between sessions.

- Select **To Scale** to print at the scale specified in the program in which the file was originally created.

- Select **To Scale** to print at the scale specified in the **Drawing Sheet Setup** dialog.

6 **Options** - Specify the number of **Copies** you would like to print.

7 **Advanced Options** - Click the **Open System Print Dialog** button to close the **Print View** dialog and print using your operating system's Print dialog instead. Not available when No Printer is selected.

8 Control the appearance of the print job **Preview** on the right side of the dialog.

- Specify the **Page** that displays in the Preview area.

- Click the buttons to **Zoom In**, **Zoom Out**, or **Fit** the selected Page to the extents of the Preview area.

- Uncheck **Update Automatically** to turn off the print job Preview and prevent it from updating as changes are made to the settings in this dialog.

- Click the **Update** button to update the print job Preview to reflect the current settings in this dialog. If Update Automatically is unchecked, clicking Update may force the Preview to be blank.

9 When **Update Automatically** is checked, a preview of the current print job displays here. The drawing sheet displays as a white rectangle, and if multiple sheets are required, you can scroll through them. If the print job is large, a progress dialog may display briefly as the preview draws or updates.

10 To help prevent unwanted printed output, information messages regarding page size, resolution, and scale may display here, depending on the settings in this dialog.

Print Image Dialog

Any view can be printed by selecting **File> Print Image**. This is the only way to print most 3D views. See "3D Rendering" on page 67.

The **Print Image** dialog is similar to the **Print View** dialog; however, the printing process is different. **Print Image** prints individual pixels as opposed to vectors (lines).
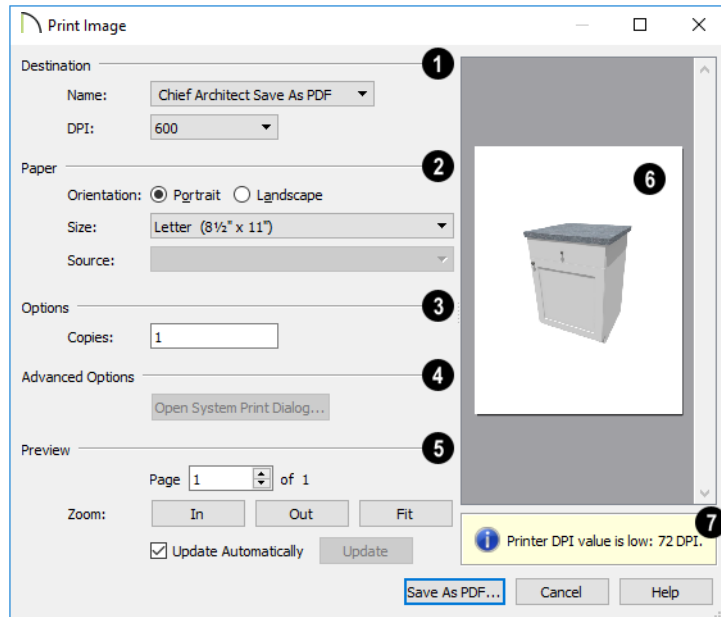
① Select the Name of the **Printer** you wish to use from the drop-down list. To print to **.pdf**, select "Chief Architect Save as PDF" from the list, or choose a **.pdf** writer installed on your system. See "Printing to a PDF File" on page 91.

② Select the **Paper Orientation**, **Size**, and **Source**.

③ Specify the number of **Copies** you would like to print.

④ **Advanced Options** - Click the **Open System Print Dialog** button to close the **Print View** dialog and print using your

operating system's Print dialog instead. Not available when No Printer is selected.

⑤ Control the appearance of the print job **Preview** on the right side of the dialog.

• Specify the **Page** that displays in the Preview area.

• Click the buttons to **Zoom In**, **Zoom Out**, or **Fit** the selected Page to the extents of the Preview area.

• Uncheck **Update Automatically** to turn off the print job Preview and prevent it from updating as changes are made to the settings in this dialog.

- Click the **Update** button to update the print job Preview to reflect the current settings in this dialog. If Update Automatically is unchecked, clicking Update may force the Preview to be blank.

6 When Update Automatically is checked, a preview of the current print job displays here. If the print job is large, a progress dialog may display briefly as the preview draws or updates.

7 To help prevent unwanted printed output, information messages regarding page size and resolution may display here, depending on the settings in this dialog.

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