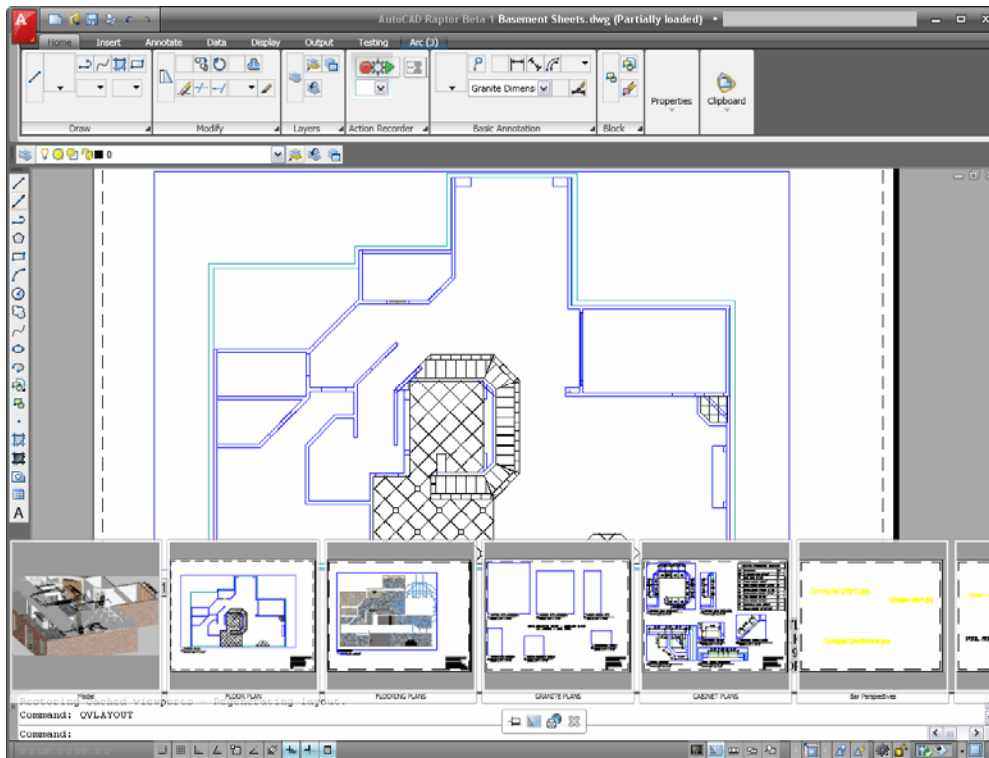


Raptor

# Preview Guide

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# Introduction

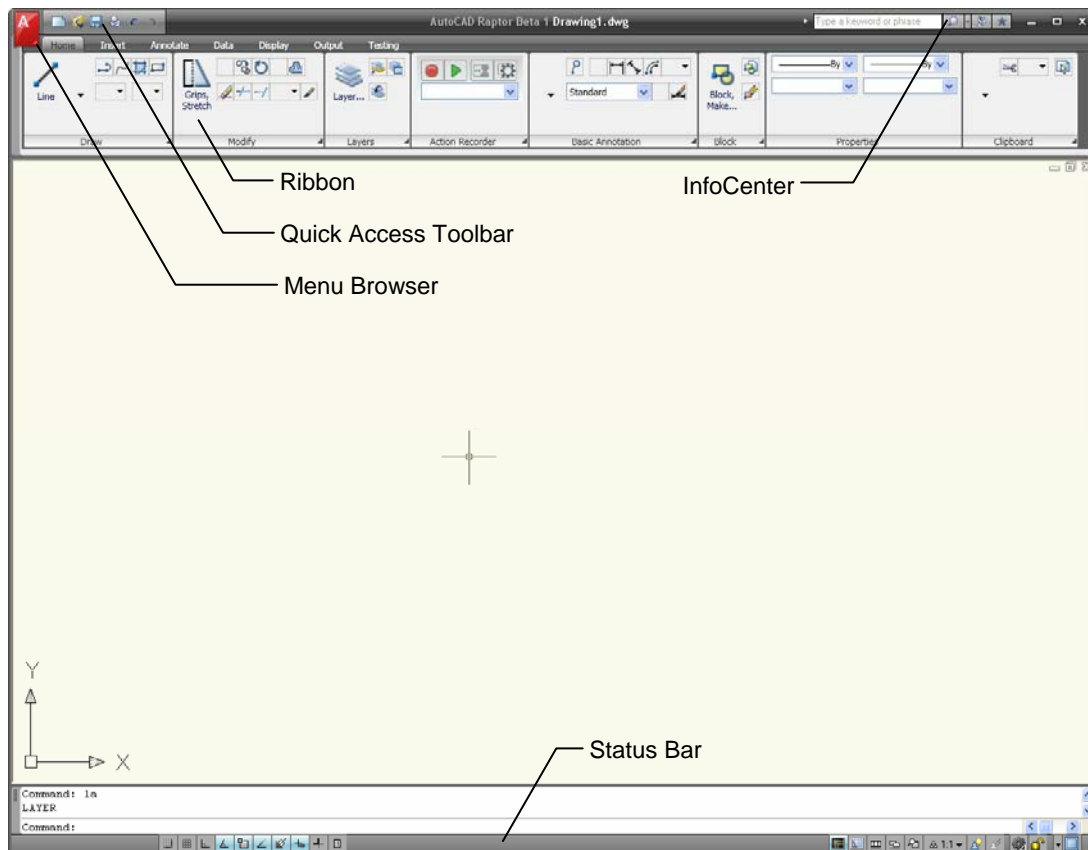
With AutoCAD® software Autodesk has just one goal in mind: increasing your productivity. Raptor boosts efficiency with customizable and extensible user interface enhancements that increase overall drafting productivity by decreasing the number of steps to reach a command. Newly designed, innovative features simplify working with layers and help make new users productive as quickly as possible. Easy-to-use navigation tools make finding your way around 3D models a snap. Move to new highs of productivity with AutoCAD software.

## User Interface

### Application Window

The Raptor Application window offers a new look and feel! It provides you with easy access to the most commonly used tools while maximizing the drawing area. The default application window includes the Menu Browser, Quick Access toolbar, InfoCenter, Ribbon, and Status bar.

The model space background has been changed to a default color that is off-white enabling you to draw in model space with dark colors that you can just as easily see on the white layouts. Many of these user interface enhancements become even more valuable with a dual monitor configuration.



**Figure 1. Raptor Application Frame**

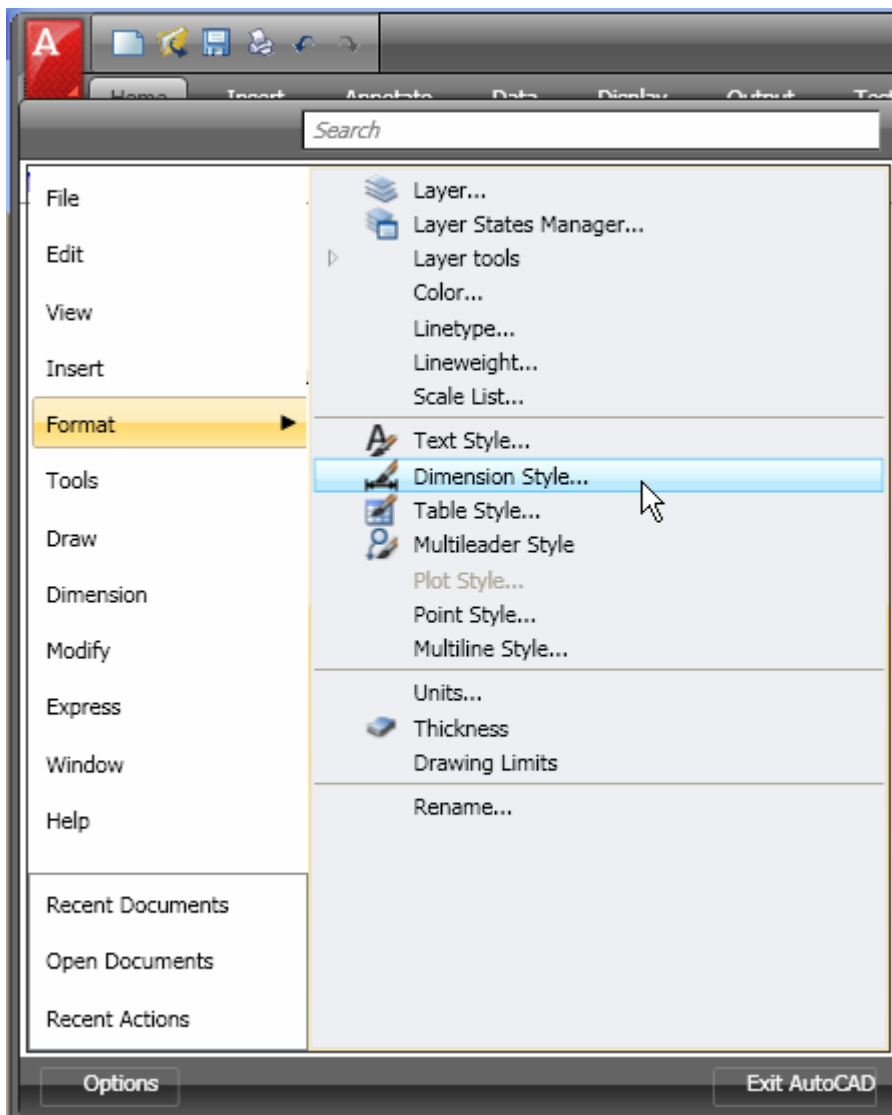
## Menu Browser

The new Menu Browser provides easy access to a variety of content, including commands and documents, from a single button in the upper left corner of the AutoCAD display.



**Figure 2. Menu Browser Button**

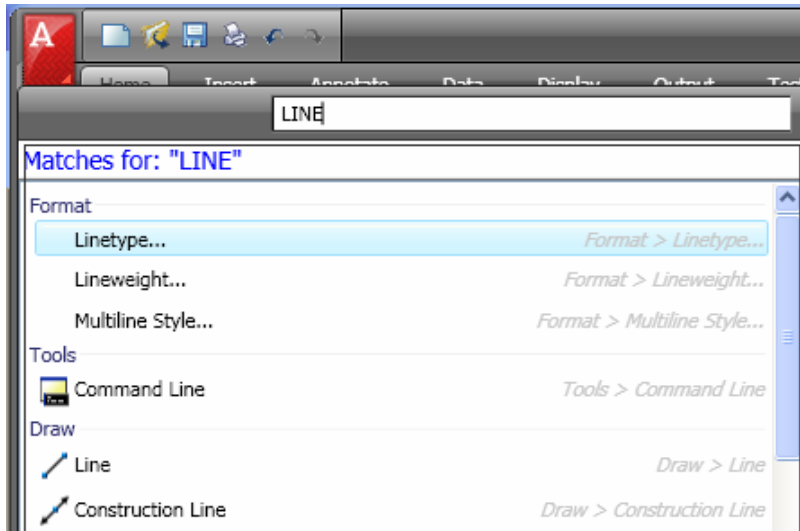
The Menu Browser displays a vertical list of the menus items, emulating the menus that were traditionally displayed horizontally across the top of the AutoCAD window. Selecting a menu from the Menu Browser expands the menu list enabling you to launch a command.



**Figure 3. Menu Browser.**

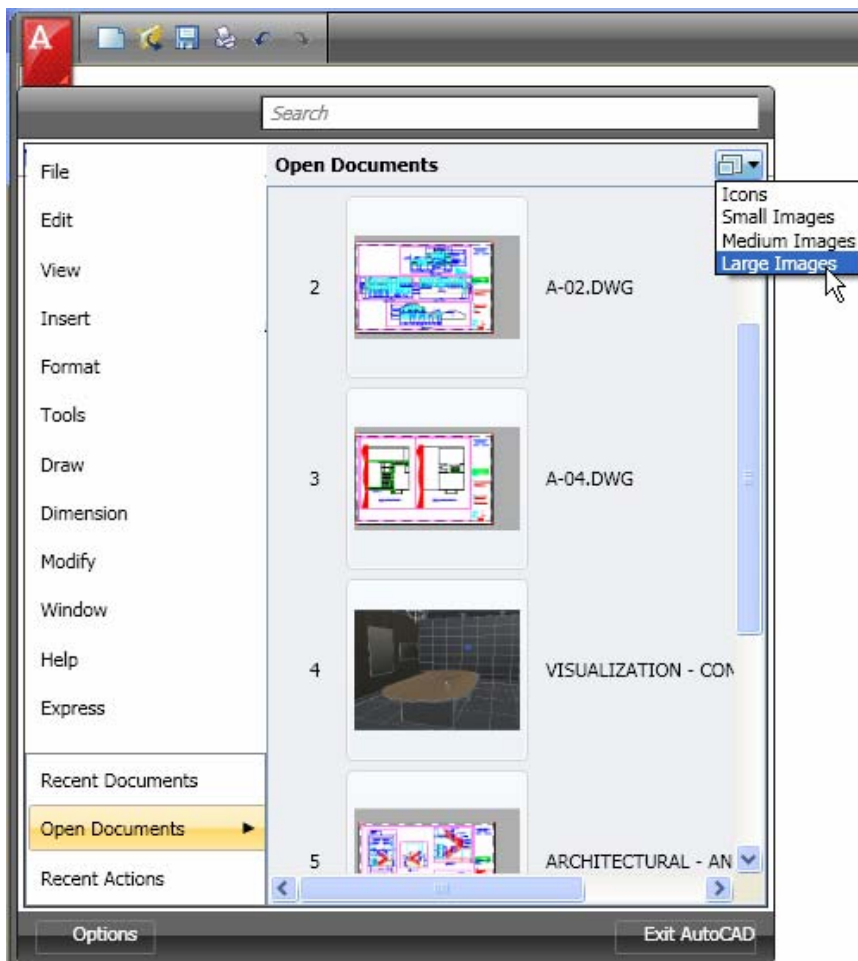
A search tool at the top of the Menu Browser enables you to search the CUI file for key terms. For example, as you begin typing L-I-N-E in the search field, AutoCAD dynamically filters the search options to display all CUI

entrees that include the word LINE (Linetype, Command Line, Line, Multiline, etc). You can double-click on a listed item to launch the associated command.



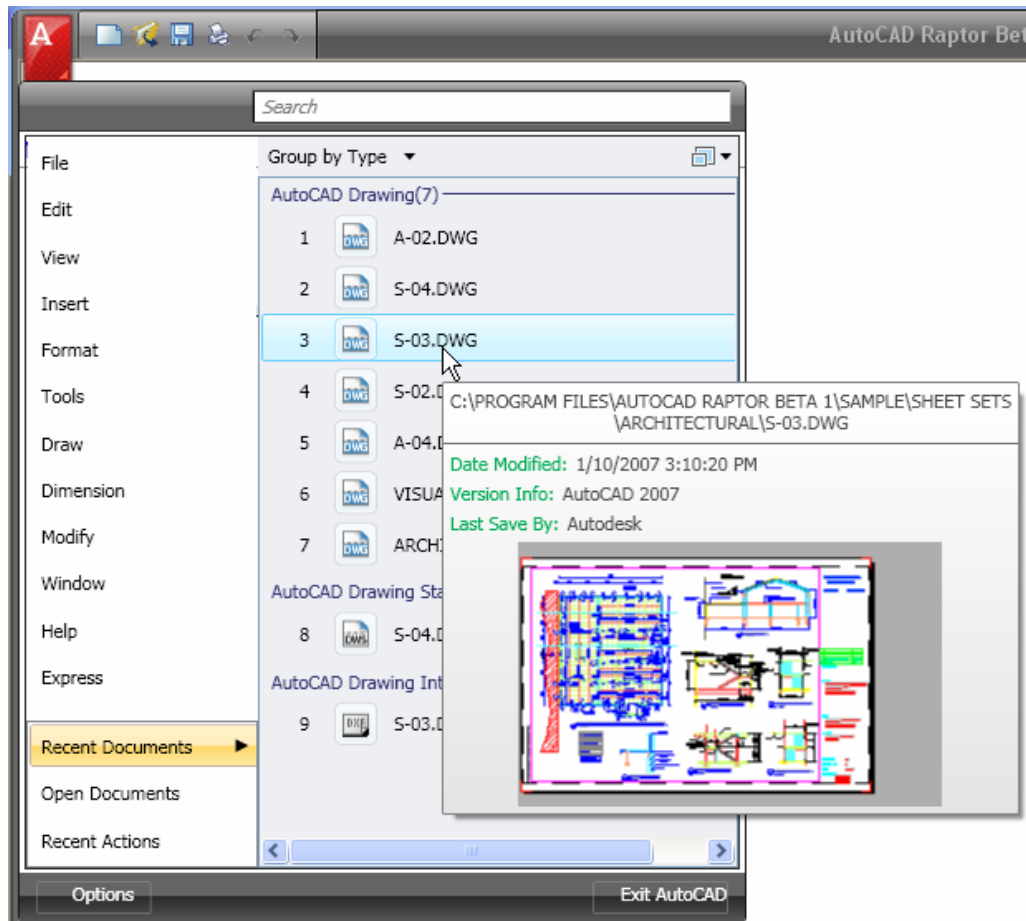
**Figure 4. Menu Browser Search Tool.**

In addition to command access, the Menu Browser enables you to view and access recent or open documents. You can display the document names with icons or with small, medium, or large preview images making them easy to identify.



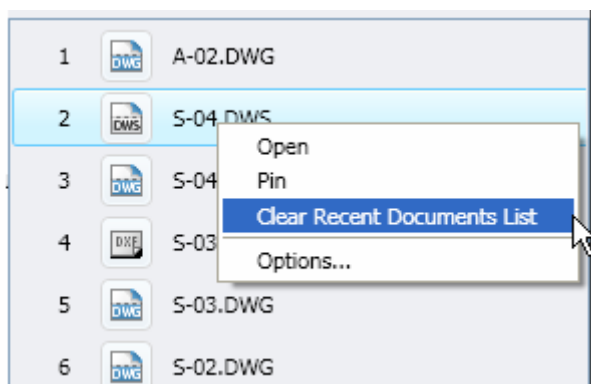
**Figure 5. Menu Browser Document Preview Images.**

When viewing Recent Documents in the Menu Browser, you can display them in an ordered list or you can group them by date or file type. Hovering the cursor over the document name automatically displays a preview image and other document information.

**Figure 6. Recent Documents.**

In addition to recent documents, the Menu Browser offers easy access to recent actions. You can view a list of the actions you have recently performed and then select one to repeat the action.

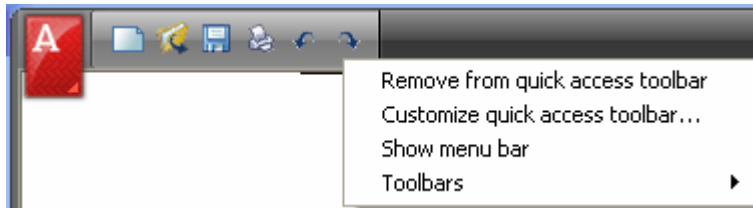
Right-click menus within the Menu Browser offer additional controls including the ability to pin a recent document or action so that it won't fall off the list, as well as the ability to clear the Recent Documents or Recent Actions lists.



**Figure 7. Right-click menu options.**

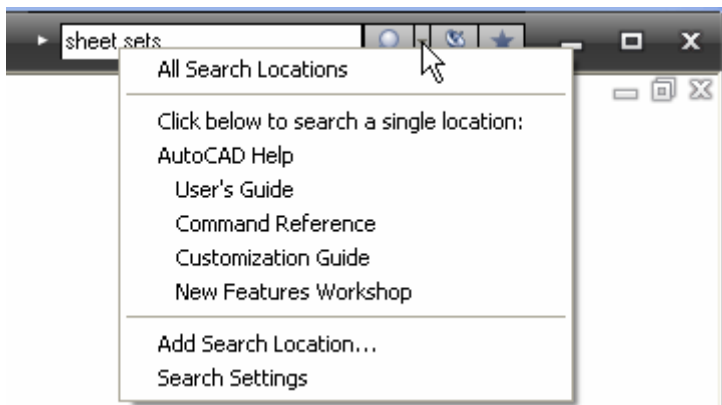
## Quick Access Toolbar

The Quick Access Toolbar is displayed at the top of the AutoCAD window, next to the Menu Browser. It includes the most common tools such as New, Open, Save, Plot, Undo, and Redo. You can add tools to the Quick Access toolbar by selecting the Customize quick access toolbar option from the right-click menu and then dragging commands from the Command list of the Customize User Interface dialog box onto the Quick Access toolbar. Easily remove tools from the Quick Access toolbar by selecting that option from the right-click menu. In addition to adding and removing tools, the right-click menu of the Quick Access toolbar enables you to control the display of the menu bar and toolbars.

**Figure 8. Quick Access Toolbar.**

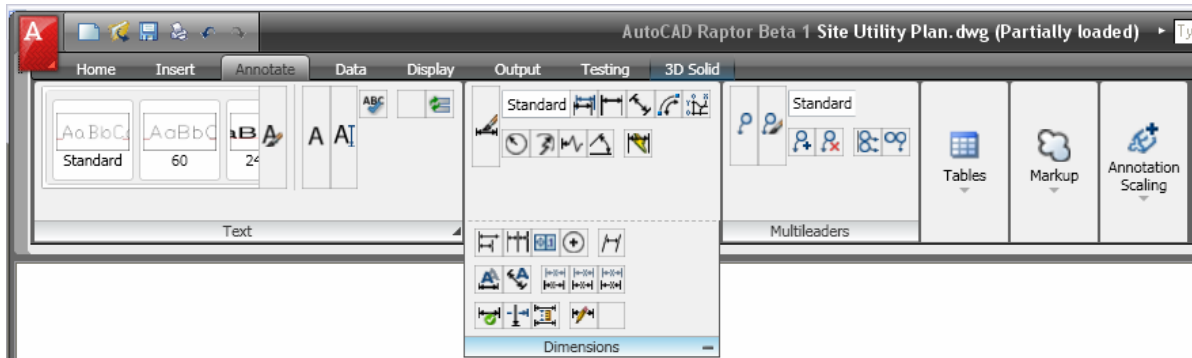
## InfoCenter

The InfoCenter has been enhanced in Raptor to provide more flexibility when searching for help. You can collapse or expand the search field, saving space on the title bar. And when searching the AutoCAD Help system for a topic, you can specify which document to search; decreasing the amount of time you spend trying to locate a topic.

**Figure 9. InfoCenter.**

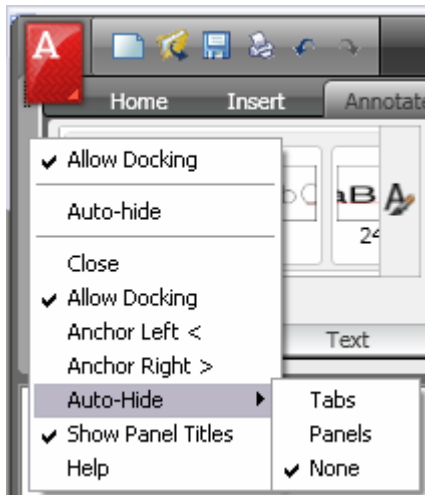
## Ribbon

The Ribbon, displayed near the top of the AutoCAD window, provides easy access to AutoCAD tools through a collection of tabs and panels. Each tab contains multiple panels and each panel contains multiple tools. Some panels can be expanded to access additional tools.



**Figure 10. Ribbon.**

By default, the ribbon is docked at the top of the AutoCAD window. However, a right-click menu enables you to control the display and behavior of the Ribbon. You can close the Ribbon and then re-open it using the RIBBON command. It can be anchored to the left or right and if you want the ribbon to take up less screen space, you can turn off the option to Show Panel Titles.



**Figure 11. Ribbon Title bar Right-click menu.**

To save even more screen real estate, turn on Auto-hide, specifying the Tabs or Panels options. Setting Auto-hide to Tabs displays only the tab names. The Panels option displays both the Tab and Panel names. Regardless of which option you choose, passing your cursor over the Ribbon automatically displays the full Ribbon.



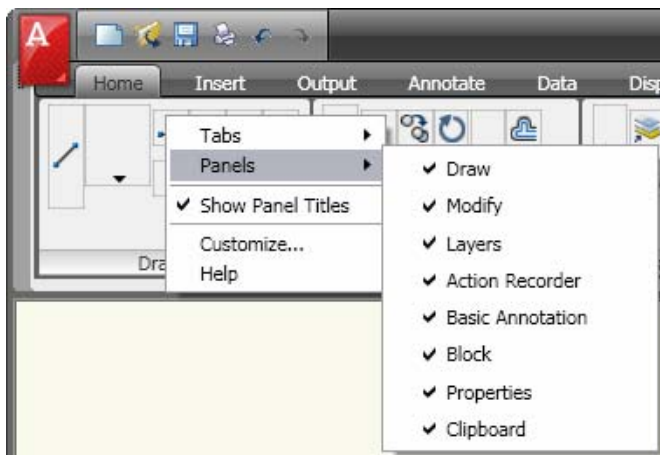
**Figure 12. Auto-hide Ribbon Tabs.**





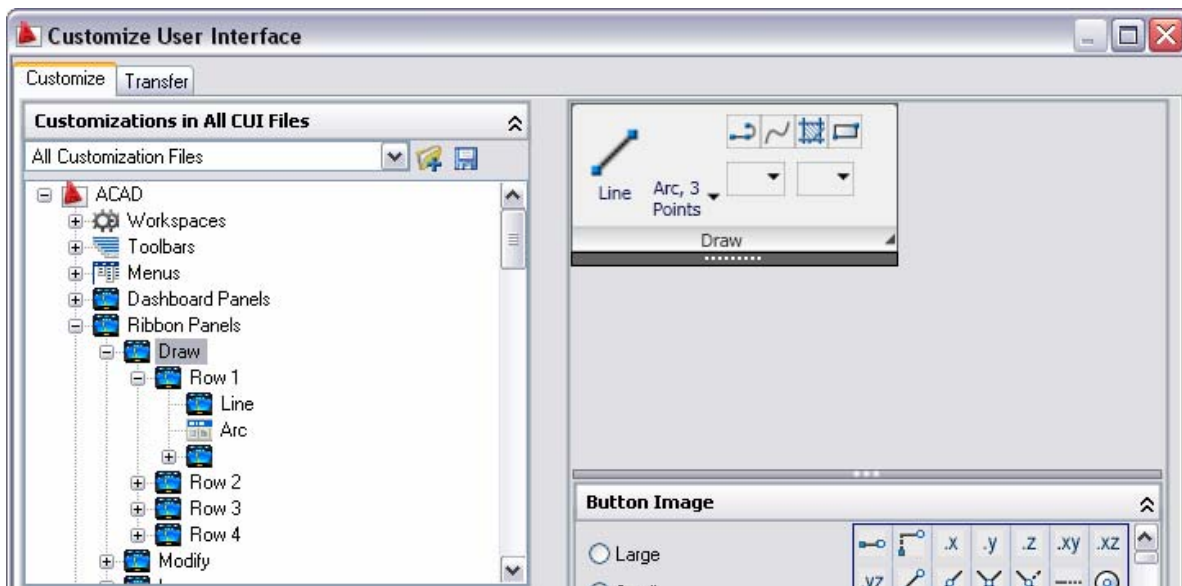
**Figure 13. Auto-hide Ribbon Panels.**

You can control the display of content within Ribbon Tabs and Panels by turning on and off Tabs and Panels in the right-click menu. Easily reorganize ribbon tabs, or panels within the tabs, by dragging and dropping them into the new location. You can even drag panels off the ribbon to create separate, floating panels.



**Figure 14. Ribbon Content Right-click menu.**

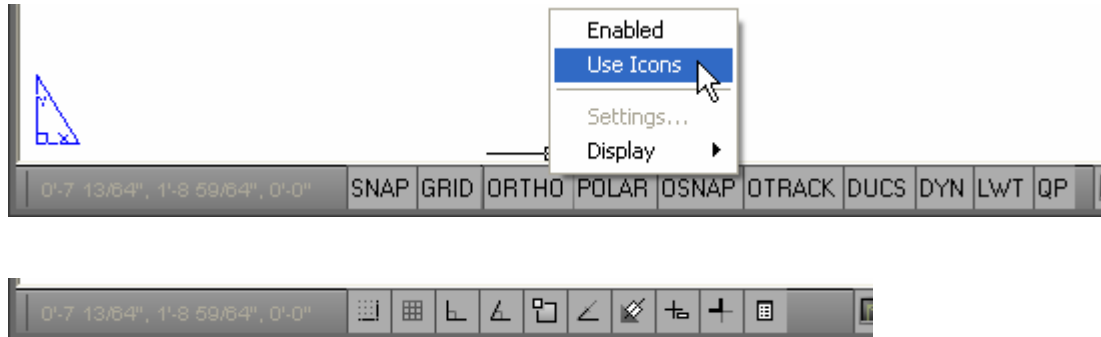
To further customize the Ribbon, you can access the new Ribbon Panels node in the Customize User Interface dialog box.



**Figure 15. Ribbon Panels in the Customize User Interface dialog box.**

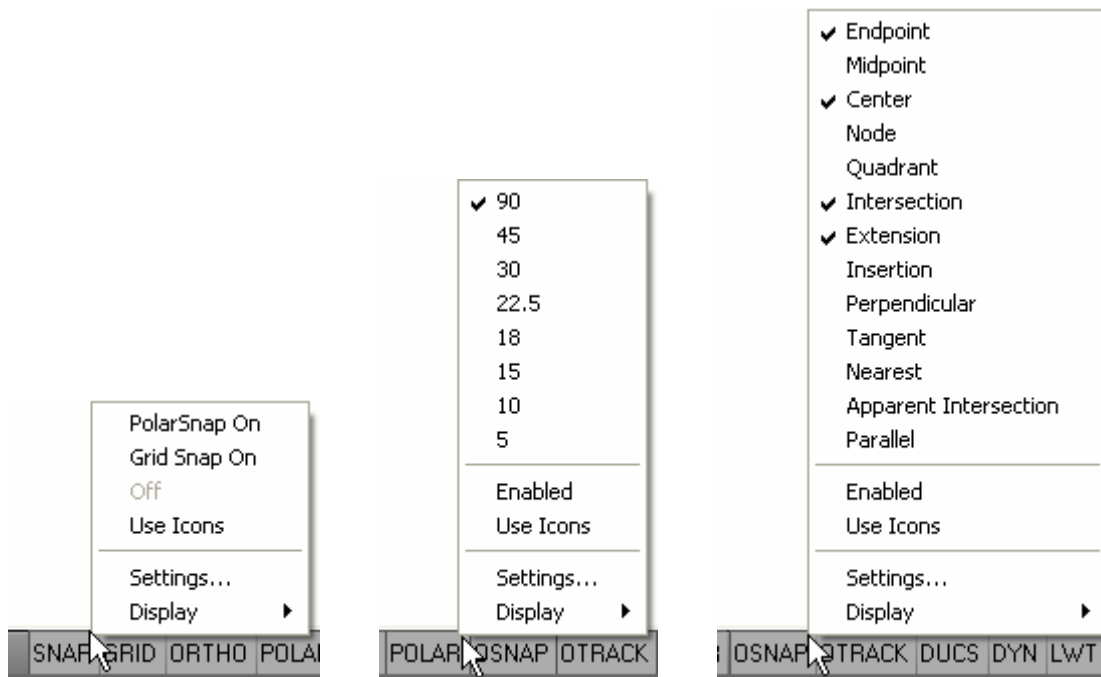
## Status Bar

The AutoCAD status bar has been updated with new tools and icons! The left side of the Status Bar includes button toggles for familiar functionality such as Osnap, Grid and Dynamic Input. A right-click menu enables you to easily switch the status bar display between icons and the traditional text labels. The Quick Properties (QP) toggle is a new addition to the Status Bar.



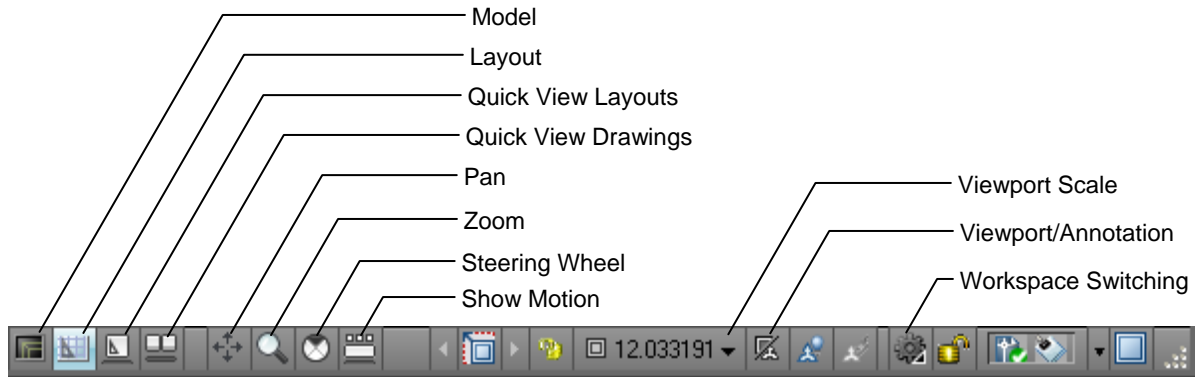
**Figure 16. Status Bar Toggles.**

The right-click menus for some status bar toggles include additional controls, which are relevant for that particular toggle. Easy access to these controls minimizes the need for you to set them in the Settings dialog box.



**Figure 17. Right-click menus for Snap, Polar, and Osnap.**

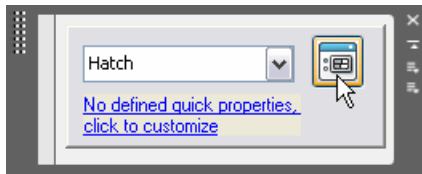
The Model and Layout buttons have moved to the right side of the status bar where several new tools have also been added. The Layout flyout is replaced by the Quick View Layouts button, which is followed by the Quick View Drawings buttons. The status bar provides easy access to navigation and viewing tools including Pan and Zoom as well as the new Steering Wheel and Show Motion functionality. The Annotation Scale is replaced by a Viewport/Annotation toggle that links the Annotation Scale to the Viewport Scale ensuring they stay in sync. A new Workspace Switching button replaces the Workspaces toolbar, providing the same functionality in considerably less space!



**Figure 18. Status Bar Tools.**

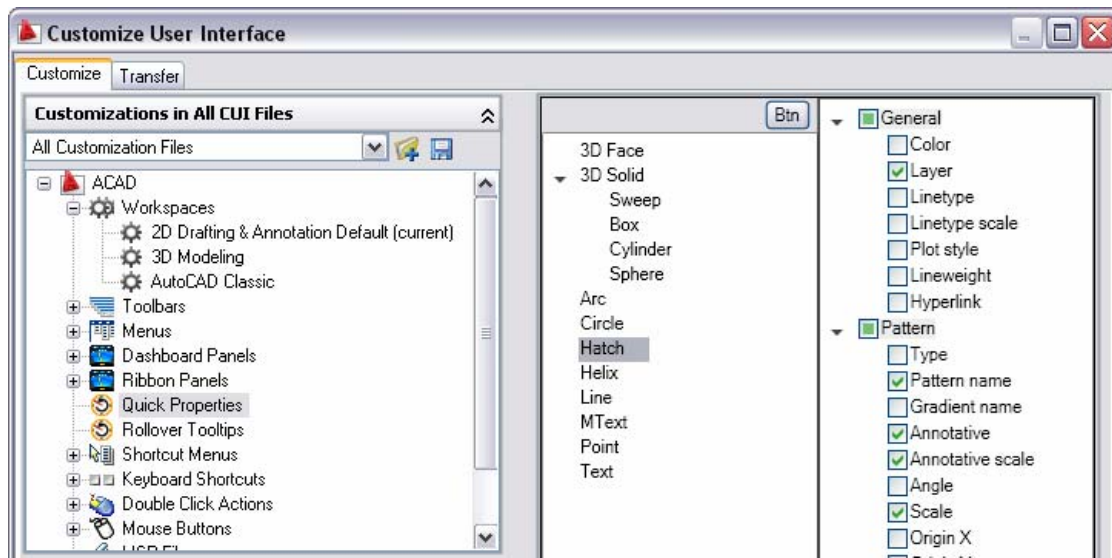
## Quick Properties

The Quick Properties panel enables you to view and modify object properties when you need them, without sacrificing screen real estate. You can turn on Quick Properties with the QP toggle on the status bar. When turned on, the Quick Properties window automatically displays upon selection of an object. You specify what properties are displayed for each object type using the Customize User Interface dialog box, which is easily accessible from the Quick Properties Window.



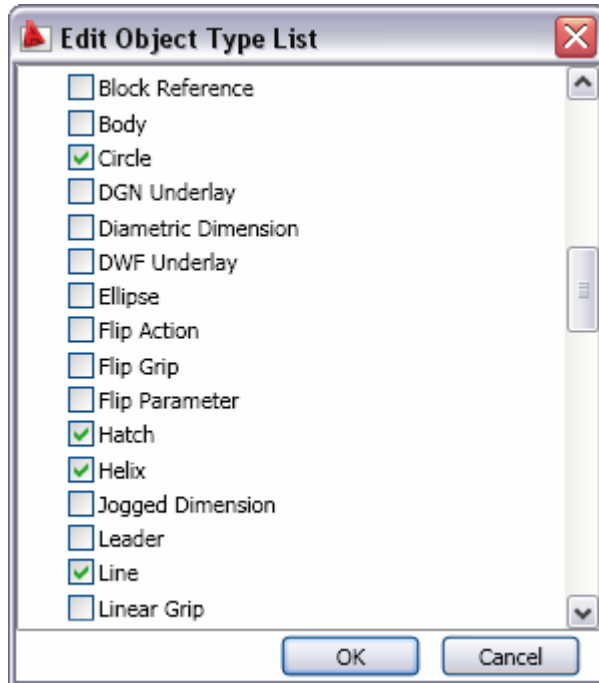
**Figure 19. Quick Properties window with no defined properties.**

The Customize User Interface (CUI) dialog box includes a new Quick Properties node, which is automatically selected when you access the CUI from the Quick Properties window. The list on the left displays object types defined for Quick Properties and the list on the right displays the available object properties as you select each object type.



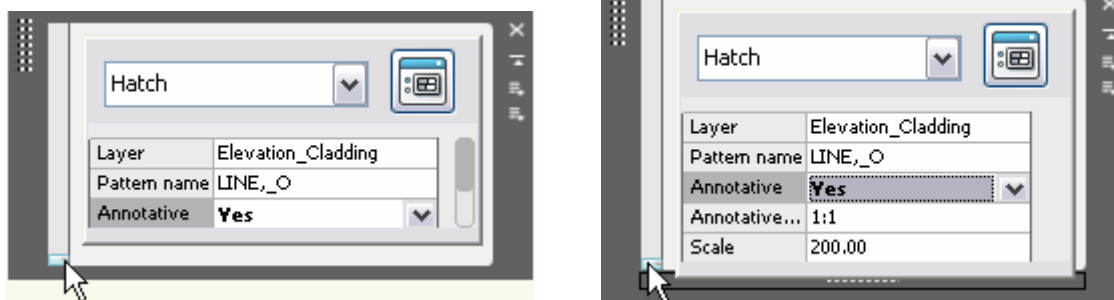
**Figure 20. Defining Quick Properties.**

You can add or remove object types from the quick properties list using the Edit Object Type button at the top of the list. Selecting that button displays the Edit Object Type List, which displays all AutoCAD object types. Only the objects that are selected from this list will support Quick Property functionality when those objects are selected in the drawing editor.



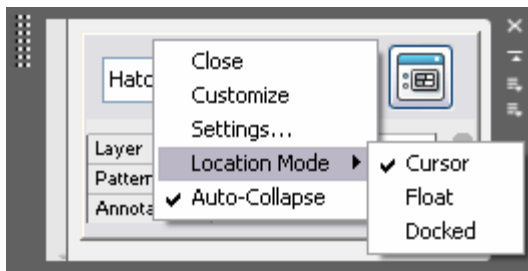
**Figure 21. Edit Object Type List.**

The defined quick properties for a supported object type display in the Quick Properties window when you select one of those objects in the drawing. If the list of defined properties exceeds the length of the Quick Properties window, you can scroll down the list using the vertical slider bar on the right side. Additionally, you can expand or collapse the Quick Properties window using the Auto-collapse control near the lower left of the properties window.



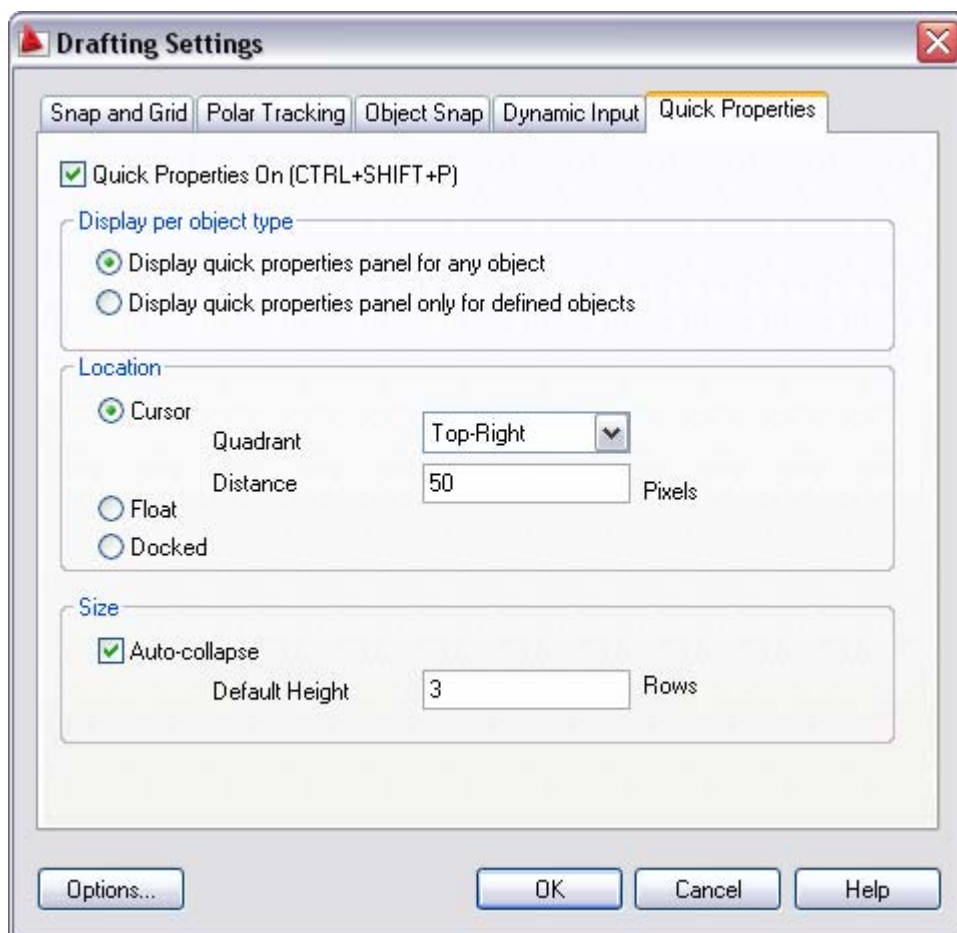
**Figure 22. Collapsed and Expanded Quick Properties window**

A right-click menu enables you to control the behavior and display of the Quick Properties window. If the Auto-Collapse option is disabled, you are unable to expand the Quick Properties window beyond its specified size. The Location Mode option allows you to specify where to display the Quick Properties window. Selecting Cursor displays it relative to the point you picked when selecting the object. The Float option displays it as a floating window in the last place you positioned it. The Docked option displays it as a panel in the Ribbon.



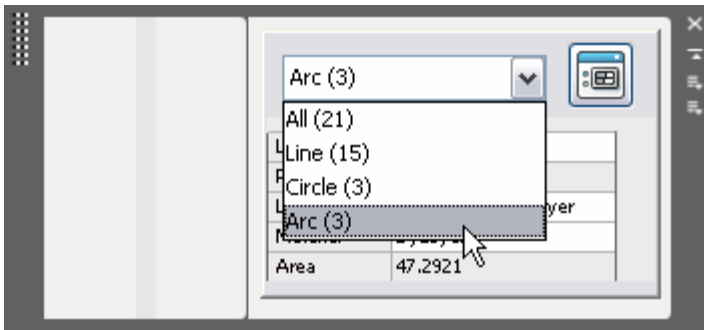
**Figure 23. Quick Properties Location Modes.**

The Settings option, available from the right-click menu, provides additional controls for the Quick Properties window through a new Quick Properties tab in the Drafting Settings dialog box. On the Quick Properties tab, you can specify whether Quick Properties is enabled and whether the Quick Properties window displays when any object is selected or only when those with defined quick properties are selected. It provides an alternate method for setting the location mode and enables you to specify direction and distance of the quick properties window relative to the cursor when Cursor mode is active. Finally, using the Quick Properties tab, you can specify the default number of rows to be visible in a collapsed Quick Properties window.



**Figure 24. Quick Properties tab of the Drafting Settings dialog box.**

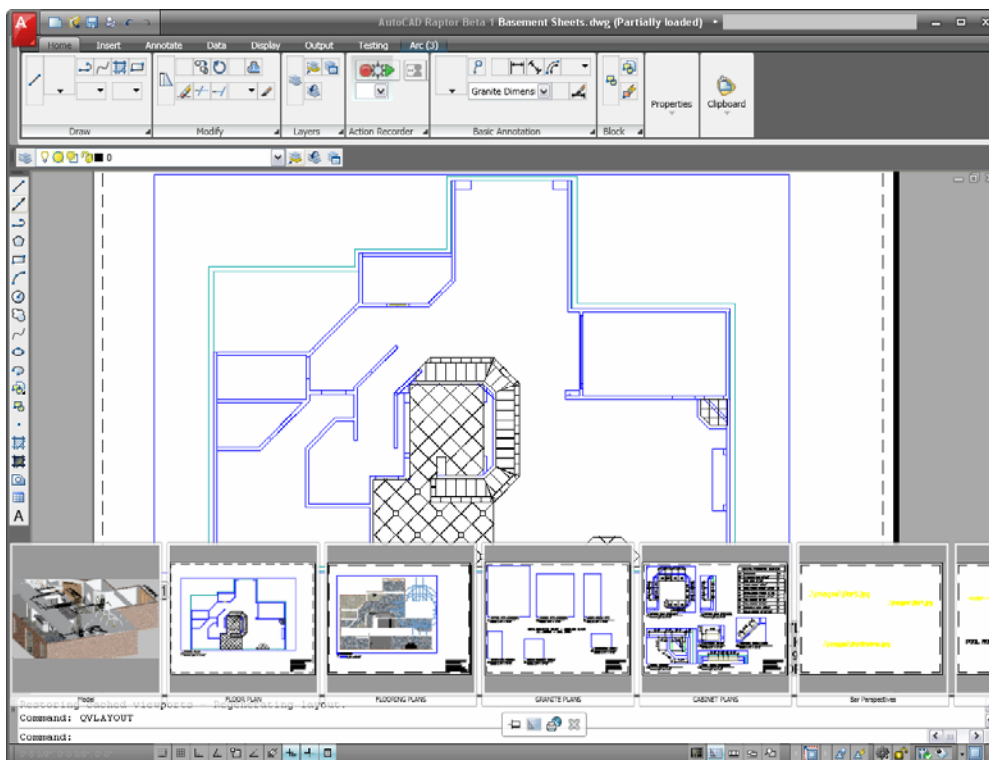
If multiple objects are selected, the Quick Properties window behaves similar to the familiar Properties window; displaying only the properties that are common to all selected objects. A drop-down list enables you to select a specific type of object in order to display all Quick Properties for that particular object type.



**Figure 25. Quick Properties window with multiple object types selected.**

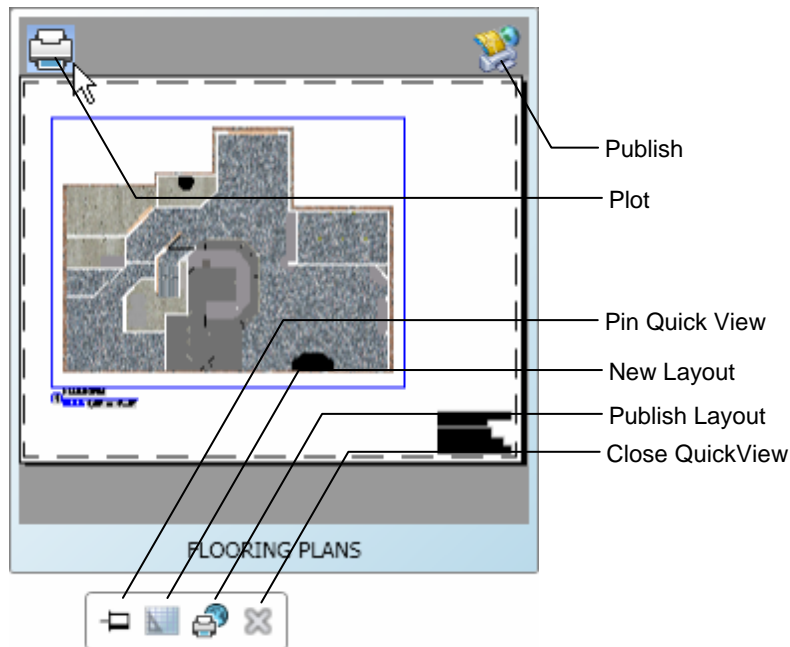
## Quick View Layouts

The Quick View Layouts button on the status bar displays a horizontal row of Quick View layout images. This new functionality provides a faster and more visual alternative to using the traditional model and layout tabs for switching between layouts within the current drawing because you can identify and select layouts, not only by name, but by appearance. Move the mouse past the edge of the image strip to view layouts which extend beyond the screen. You can increase or decrease the size of the layout preview images by pressing the Ctrl key while rolling the mouse wheel up or down.



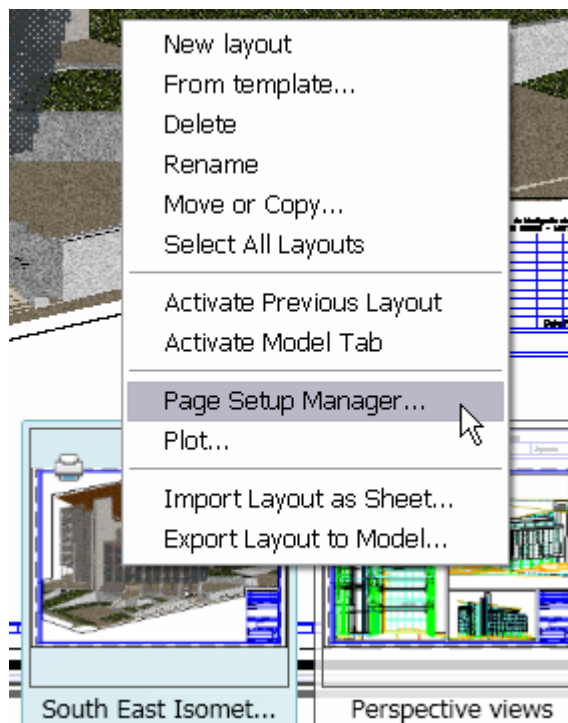
**Figure 26. Quick View Layouts.**

Passing the cursor over a layout preview displays Plot and Publish buttons in the upper corners of the image. Additional tools are available in the Quick View control panel, which is automatically displayed below the Quick View images. Using these tools you can pin Quick View open so that it remains visible while you work in the drawing editor. You can use the Close tool to turn off Quick View when you no longer want it displayed. The New Layout button creates a new layout in the current drawing and displays the preview at the end of the row of images. You can easily publish all the layouts in the drawing using the Publish Layout tool.



**Figure 27. Quick View Layouts Control Panel**

You can right-click on a layout preview to display the familiar layout menu options including access to the Page Setup Manager. A new option in the right-click menu enables you to export layout geometry to model space in a new drawing.



**Figure 28. Quick View Layouts - Right-click Menu.**

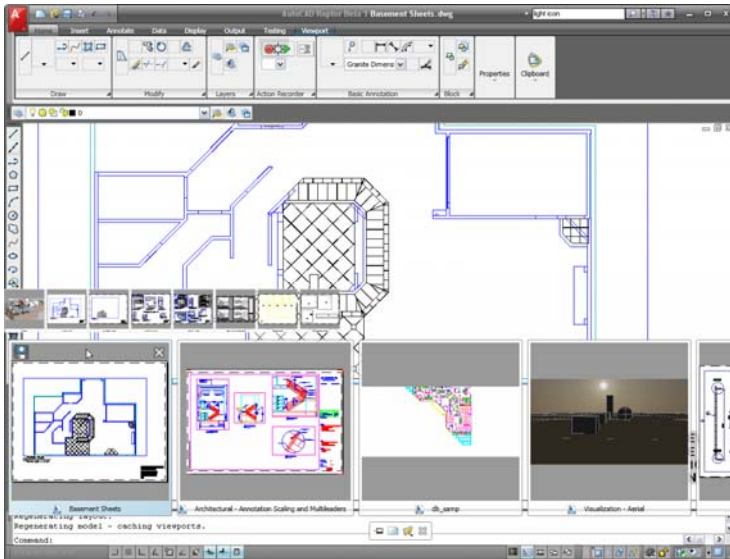
## Quick View Drawings

The Quick View Drawings button, on the status bar, displays a horizontal row of Quick View drawing images. This new functionality is a faster and more visual alternative to using the Ctrl-Tab key combination or the



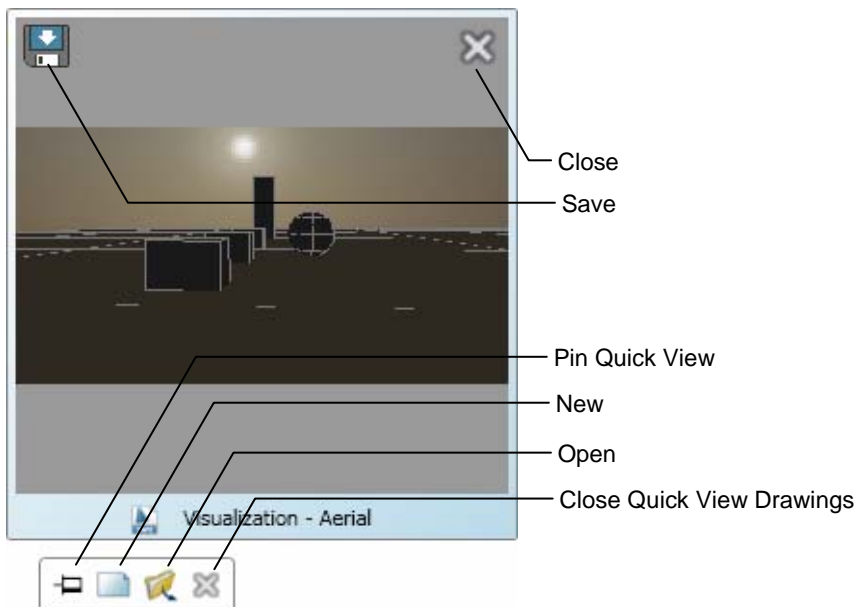
## RAPTOR PREVIEW GUIDE

Window menu for switching between open drawings. Similar to Quick View Layouts, you can move the mouse past the edge of the image strip to view drawing images which extend beyond the screen. You can increase or decrease the size of the drawing preview images by pressing the Ctrl key while rolling the mouse wheel up or down.



**Figure 29. Quick View Drawings.**

Passing the cursor over a drawing preview displays Save and Close buttons in the upper corners of the image enabling you to quickly save or close an open drawing; not just the current one! Additional tools are available in the Quick View Drawings control panel, which is automatically displayed below the Quick View images. Using these tools you can pin Quick View Drawings open so that it remains visible while you work in the drawing editor. You can use the Close tool to turn off Quick View Drawings when you no longer want it displayed. The New button creates a new drawing and displays the preview at the end of the Quick View bar. You can easily open existing drawings using the Open tool.

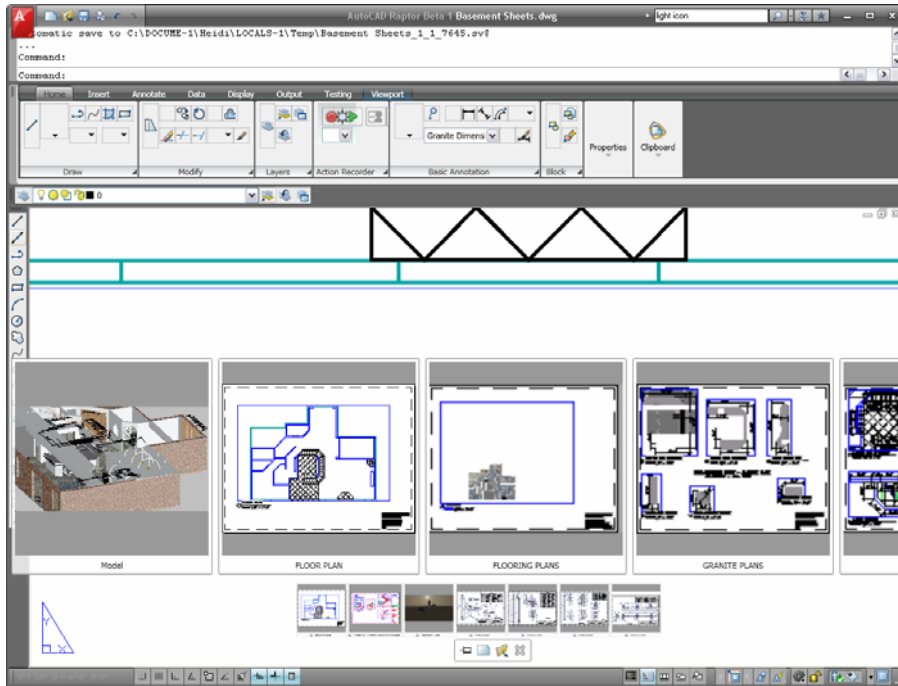


**Figure 30. Quick View Drawings Control Panel**



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When you hold the cursor over a Quick View Drawing image, preview images of all the layouts in that drawing, including model space, display above the Drawing images as a separate image bar. You can easily view and activate any layout within any open drawing directly from the Quick View Drawing bar. To see a larger view of the layout images, simply pass the cursor over a layout preview image. AutoCAD automatically enlarges the layout images and reduces the size of the drawing images. Moving the cursor back over a drawing image returns the Quick View Drawing images to the larger size and the Quick View Layouts to the smaller size.



**Figure 31. Quick View Layouts within Quick View Drawings.**

## Tooltips

Improved tooltips in Raptor provide you with more information as you need it. Tooltips automatically display as you pass your cursor over various tools. The improved tooltips not only display the name of the tools, but they provide additional information and even graphics, directly from the Help system.

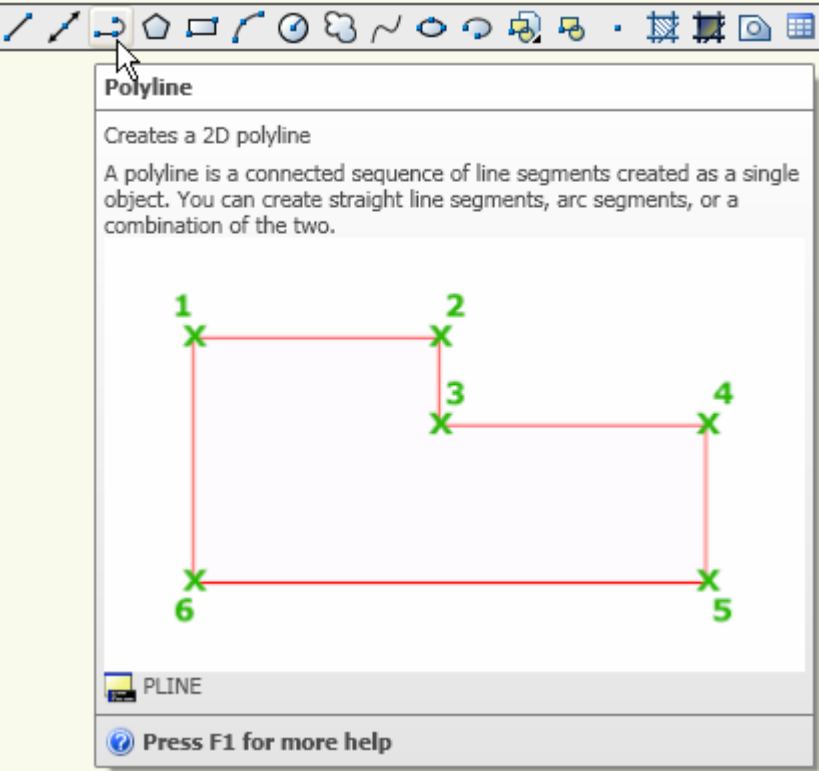


Figure 32. Tooltip Help.

In addition to command tools, you can control the content displayed in the tooltips for the External References palette and the Sheet Set Manager. When you right-click on the border of either of these palettes, you can select Tooltip Style and then choose to display a preview, details, or a preview and details. When displaying a preview, you can specify a small, medium or large image.

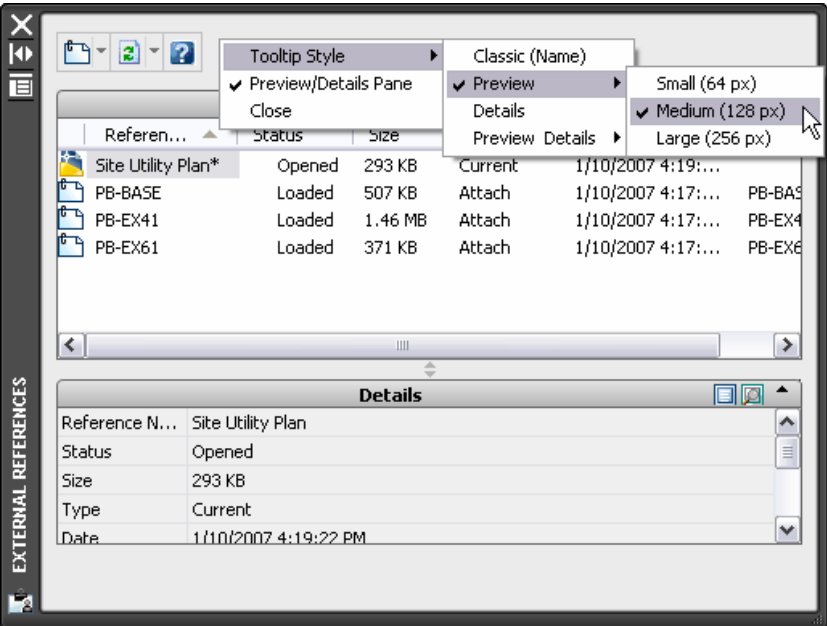
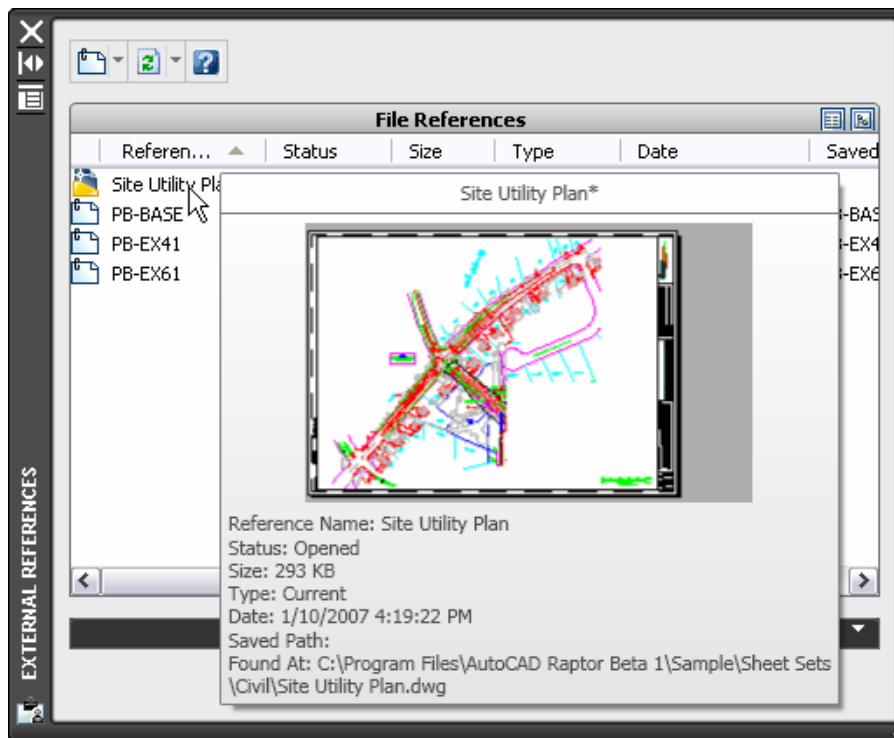


Figure 33. Tooltip Style.

As you pass the cursor over items in the sheet set or the external references managers, you can quickly preview the drawing geometry and detail information without selecting the item.



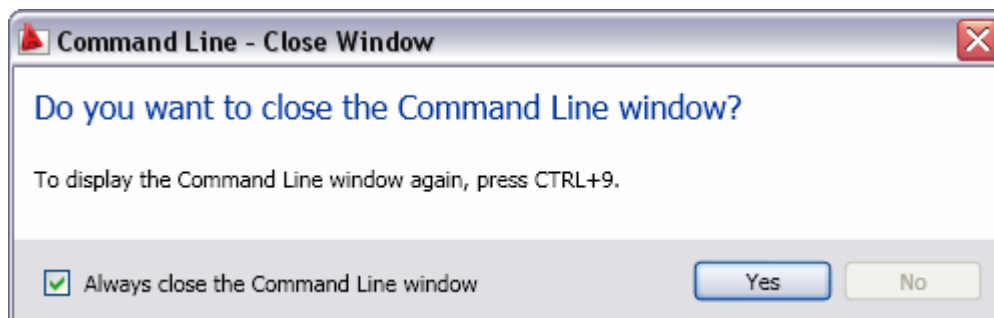
**Figure 34. Preview and Details Tooltip.**

Preview images display as tool tips for layout tabs helping you locate the desired layout prior to selecting it.



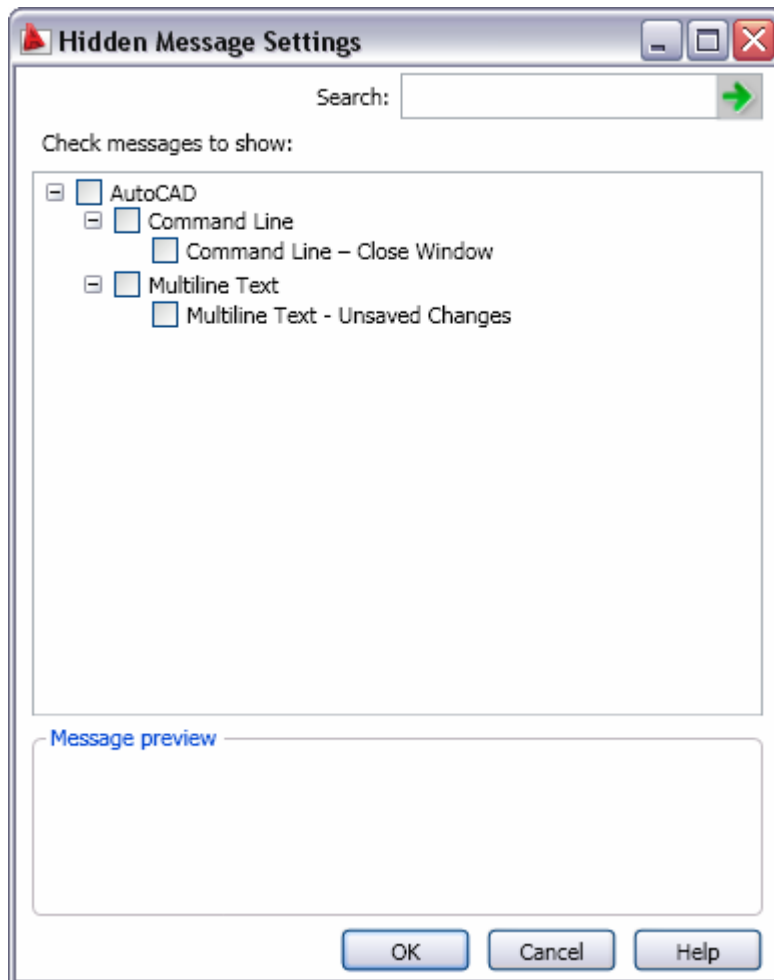
## Hidden Message Settings

Warning messages have been updated in Raptor to provide more consistent messaging and interaction throughout the application. You can control the display of individual warning messages unlike in previous releases of AutoCAD. In the past, if you chose the option "Don't show me this again" when a warning message was displayed, for example when closing the Command window, you couldn't restore that warning message without all previously hidden messages also being restored. In Raptor, when you select an option that hides a particular message, for example, Always close the Command Line window, AutoCAD stores it in a list of hidden messages.



**Figure 35. Command Line - Close Window.**

You can selectively restore hidden messages using a new option on the Systems tab of the Options dialog boxes.

**Figure 36. Hidden Message Settings.**

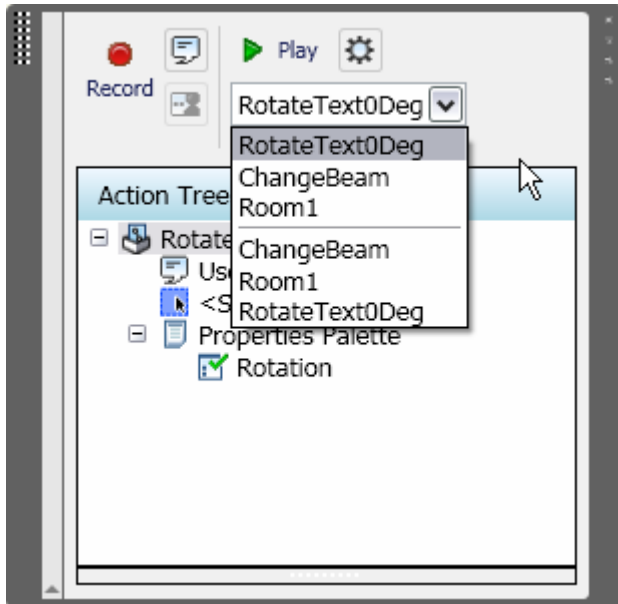
## Design and Drafting

New and enhanced tools in Raptor help you work more efficiently by minimizing repetitive tasks.

### Action Recorder

A new action recorder can significantly increase productivity by automating those repetitive tasks! Easily record actions and save them to a named macro. Replay the macro to repeat the procedure in the future with minimal effort. Access the new Action Recorder from the Action Recorder panel on the Home tab of the Ribbon or using the ACTRECORD command. Use the Record button in the Action Recorder to begin creating an action macro. While it is recording, you can launch commands, enter values, and select objects using familiar AutoCAD functionality. The action recorder can record typical actions from the command line as well as from toolbars, ribbon panels, pulldown menus, the Properties window, the Layer Properties Manager, and the Tool Palette. You can create more robust and interactive macros by including text messages and requests for user input. When you are finished performing a repetitive operation, press the Stop button in the Action Recorder and enter

an appropriate name for the action macro. To replay a macro, simply select it from the macro list and choose the Play button.



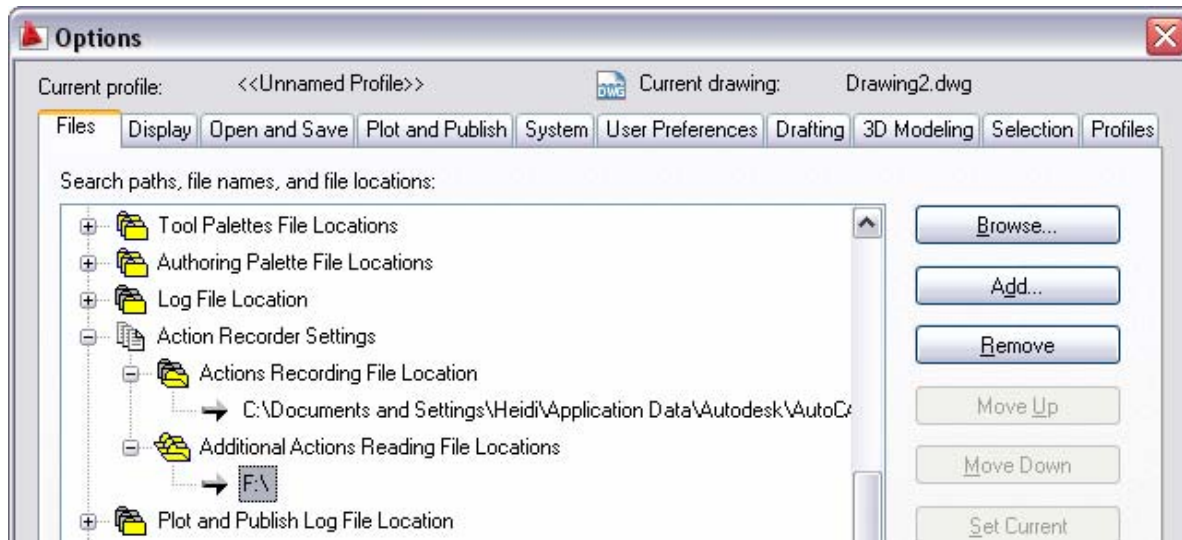
**Figure 37. Action Recorder Panel**

You can control the behavior of the Action Recorder panel with various options in the Action Recorder Preferences dialog box.



**Figure 38. Action Recorder Preferences.**

Each action recording that you create is saved as an individual file and stored in the location specified by the Action Recording File Location option on the Files tab of the Options dialog box. You can easily share your action recordings or use those created by others by including the shared path in the list of Additional Actions Reading File Locations.



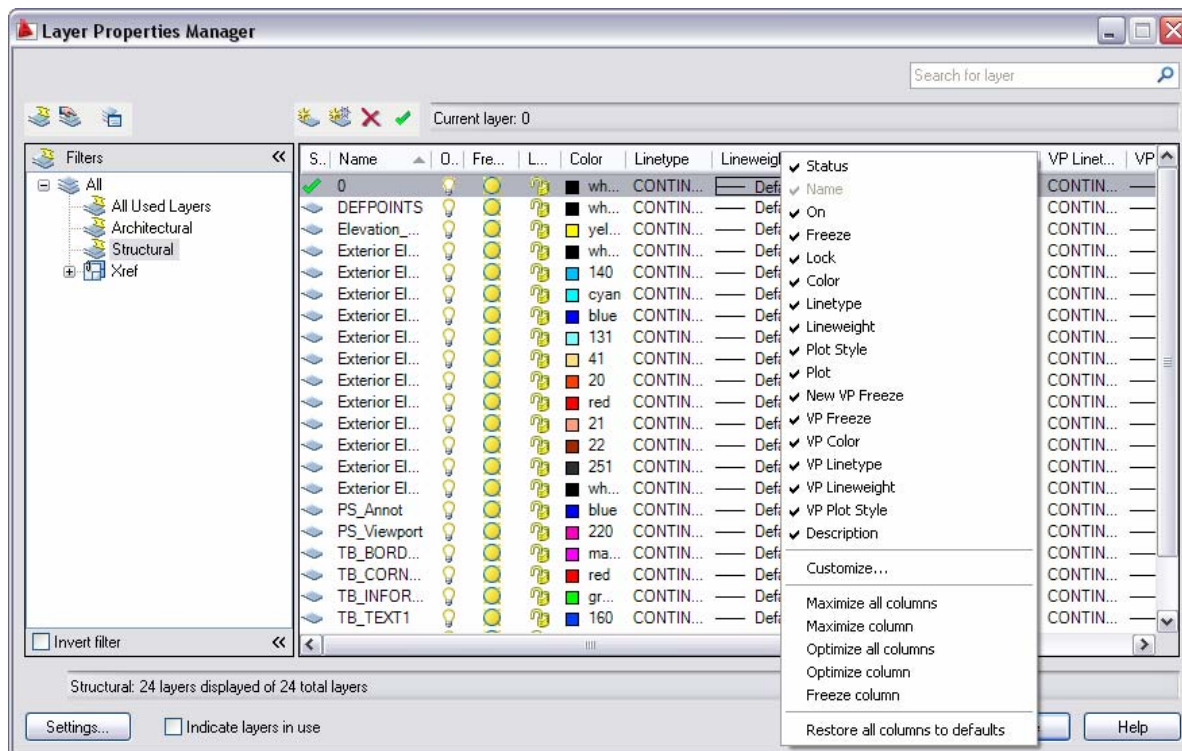
**Figure 39. Action Recorder Settings.**

Action recordings behave similar to other AutoCAD commands enabling you to call one macro from another or assign short-cut aliases using the acad.pgp file.

## Layer Management

The Layer Properties Manager includes many enhancements to help increase productivity. It has been converted to a modeless dialog box enabling you to keep it displayed while using other commands. The changes you make within the Layer Properties Manager are instantly applied to the drawing without the need for you to press an Apply button. You can freeze and unfreeze columns enabling you to display key information, such as the layer name, while accessing layer properties at the opposite side of the dialog box. Right-click menu options have been updated for clarity and additional functionality. You can optimize one- or all- columns to ensure no content is truncated and maximize one- or all- columns to ensure that no content or column headers are truncated. And more descriptive tooltips are displayed for the column headers. To gain additional real estate in the Layer Properties Manager, you can collapse the Filters pane.

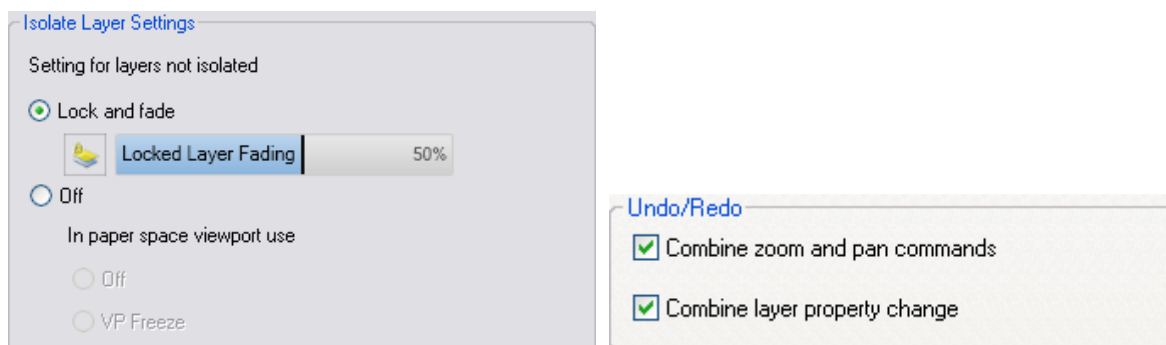
You can access the new modeless Layer Properties in Beta 1 using the LAYER2 command.



**Figure 40. Layer Properties Manager.**

You can minimize the Layer Properties Manager, keeping it easily accessible while consuming minimal drawing real estate. Or, better yet, access typical layer controls from the new Layer panel on the Ribbon. Aside from the ability to create layer filters, the expandable Layer panel includes all the functionality from the Layer Properties Manager.

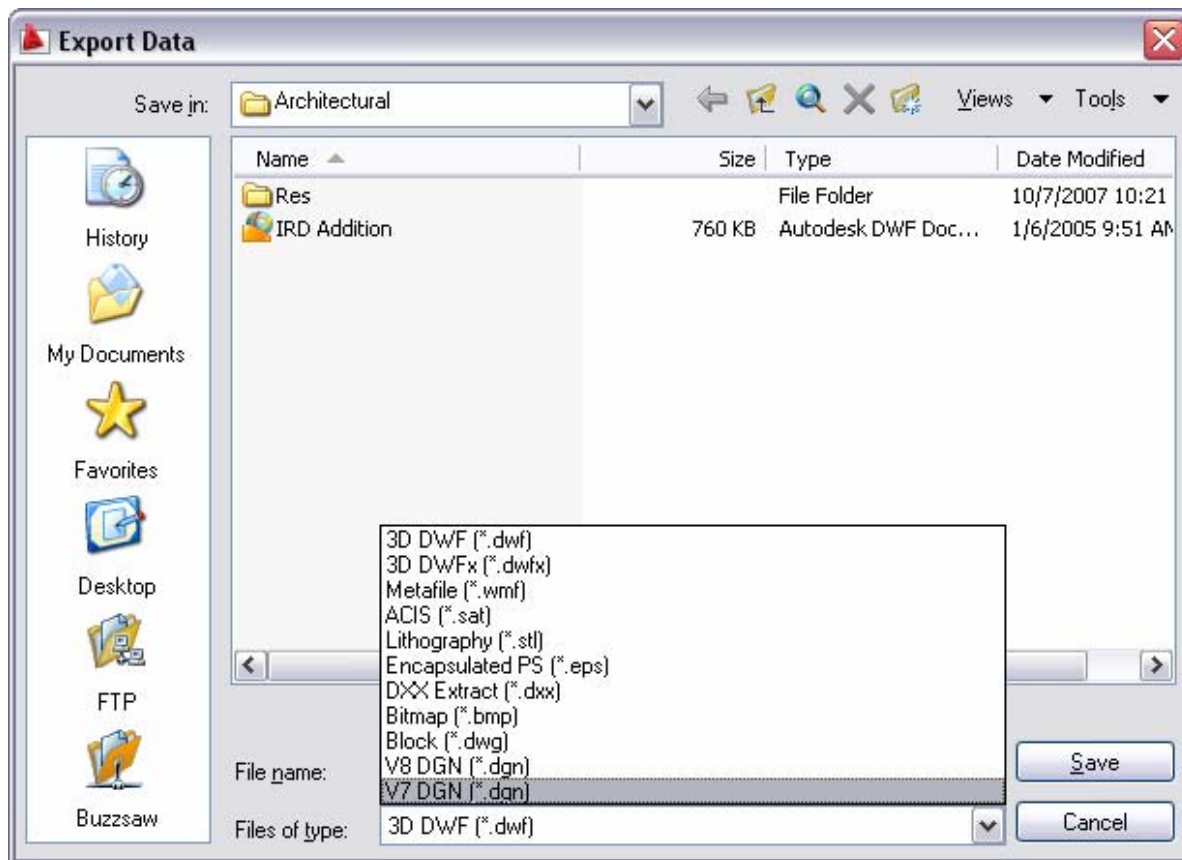
Layer Isolate controls have been added to the Layer Settings dialog box and a new option to combine layer property changes for Undo and Redo operations is accessible from the User Preferences tab of the Options dialog.



**Figure 41. Layer Controls.**

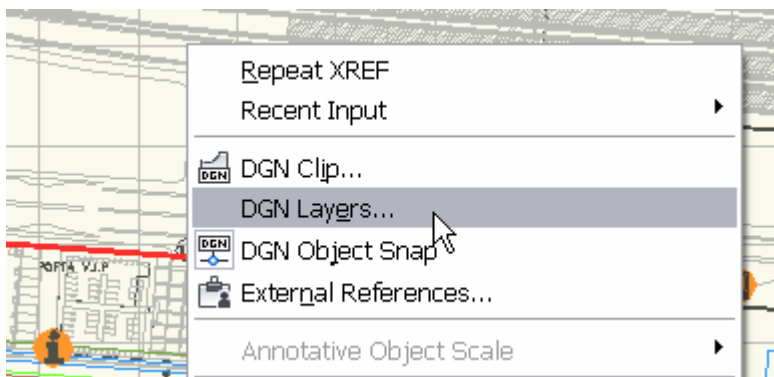
## Working with DGN files

Raptor includes support for exporting your AutoCAD DWG file to Bentley's MicroStation® V7 DGN format in addition to the V8 DGN support that was added in AutoCAD 2008. You'll find the new V7 DGN option in the Files of Type list when you use the DGNEXPORT command.



**Figure 42. DGN Export.**

You can now control the layer visibility of attached DGN files by selecting the DGN Layer option from the right-click menu with a DGN attachment selected.



**Figure 43. DGN Layer Control.**

A new DGN mapping tool enables you to map DGN levels, linetypes, lineweights, and colors to AutoCAD layers, linetypes, lineweight, and colors and vice versa. Save and access named DGN mappings for increased control during the import and export of DGN files. You can access the DGN Mappings using the new DGNMAPPING command and specify the location for DGN Mapping Setups from the Files tab of the Options dialog box.



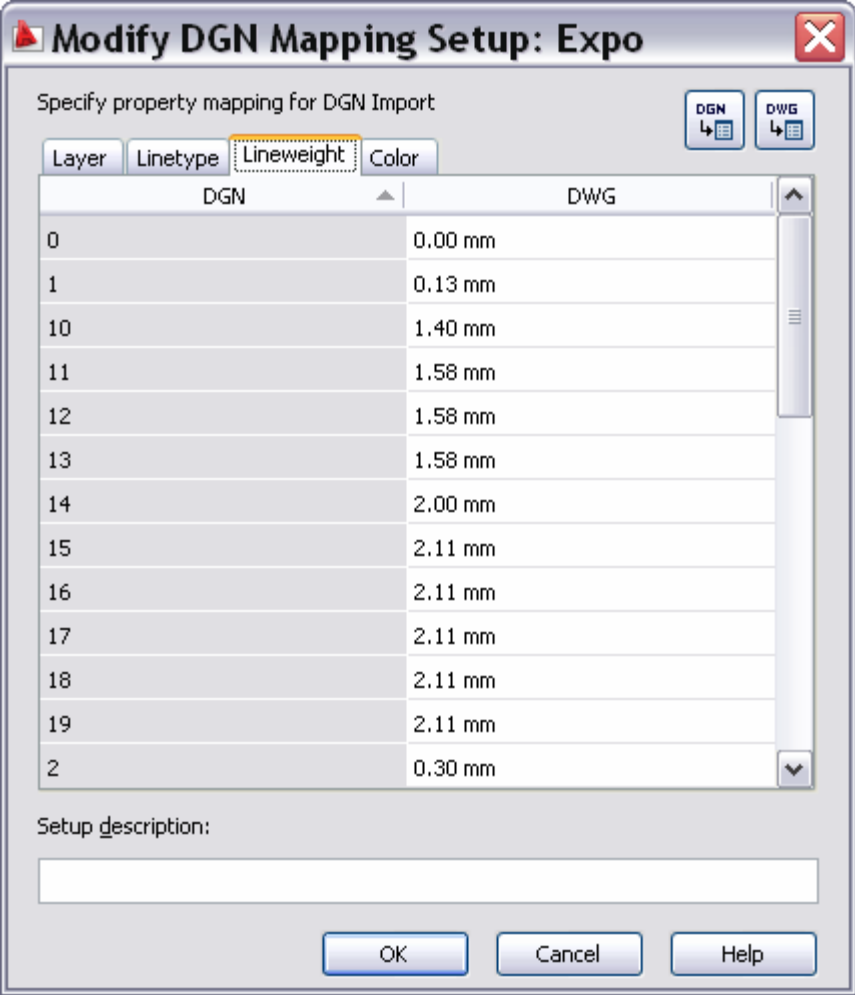
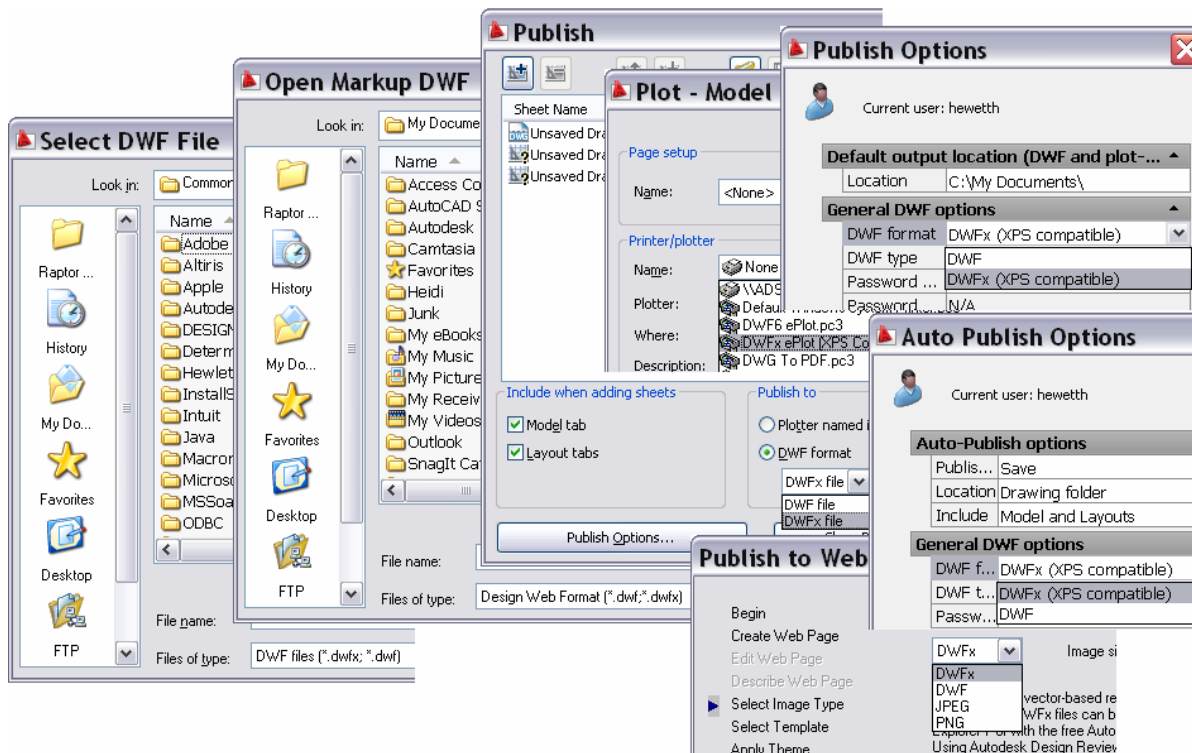


Figure 44. DGN Mappings.

## DWFX Support

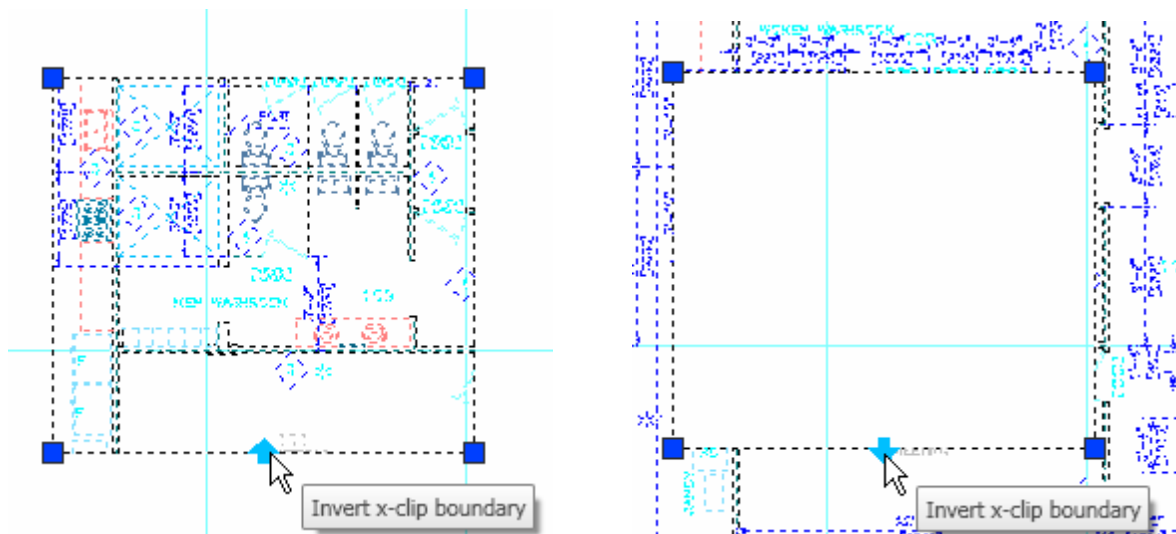
Raptor includes support for DWFX, which is a DWF format that is compliant with Microsoft's XML Paper Specification (XPS). DWFX files are easily distributable on the Windows® Vista™ platform as this format is supported by the XPS Viewer. You'll find DXFX listed along with DXF in all DWF-related functionality including Markup, External References (DWFATTACH), Publish, and Plot.



**Figure 45. DXF File Format.**

## XREF Clipping

You can now use grips to edit the boundary of a clipped external reference. Ensure the XCLIPFRAME system variable is set to 1 and then select the clipped xref and grab a grip! In addition to using grips to edit the clip boundaries, a new grip enables you to quickly invert the clipping area.



**Figure 46. Xref Clipping Grips.**

## Interactive Array Preview

When you preview an array of objects from the ARRAY command, you can pan, zoom and navigate the model before accepting the newly arrayed objects. Click anywhere or press Escape to return to the Array dialog or right-click to accepting the new array.

## Find and Replace

The Find and Replace functionality has been updated to include an expandable dialog box and more options. Use the FIND command to access the Find and Replace dialog box then select the More Options icon in the lower left corner to view and modify the search options and text types. The display automatically zooms into the text as it is found.

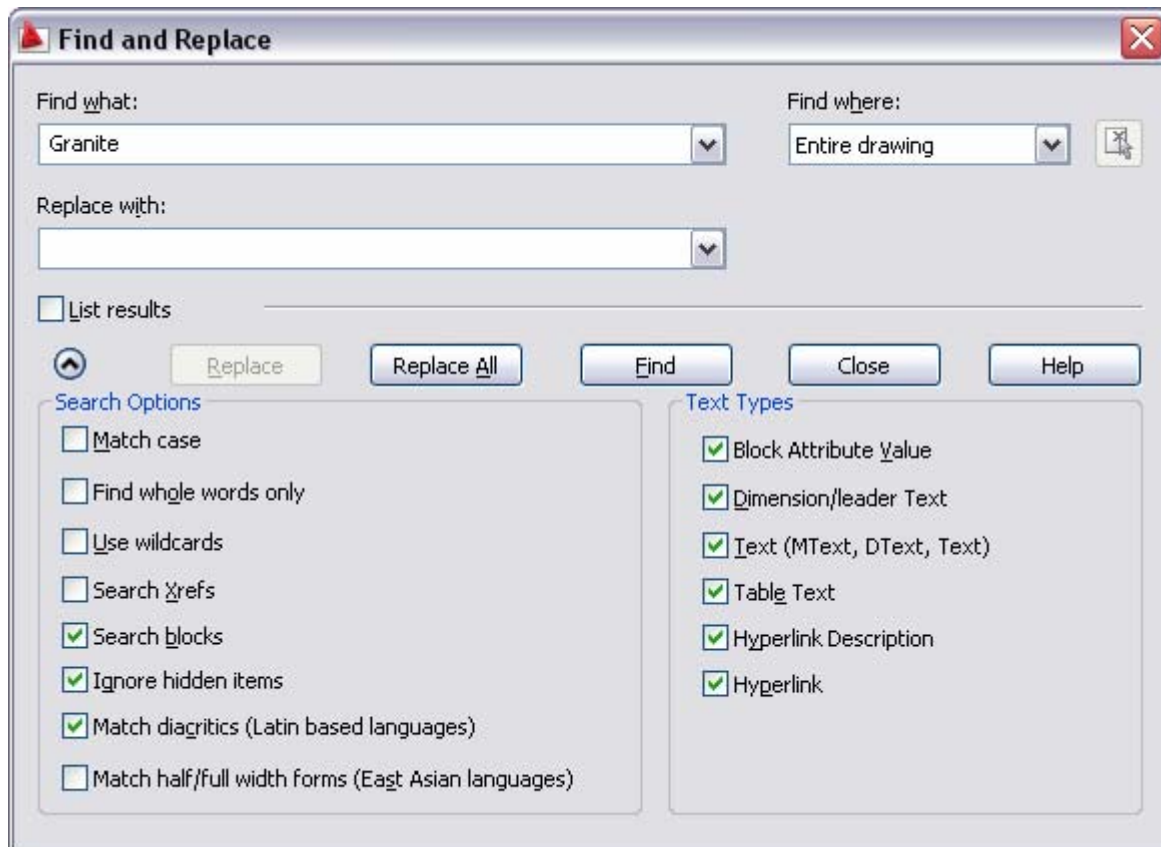


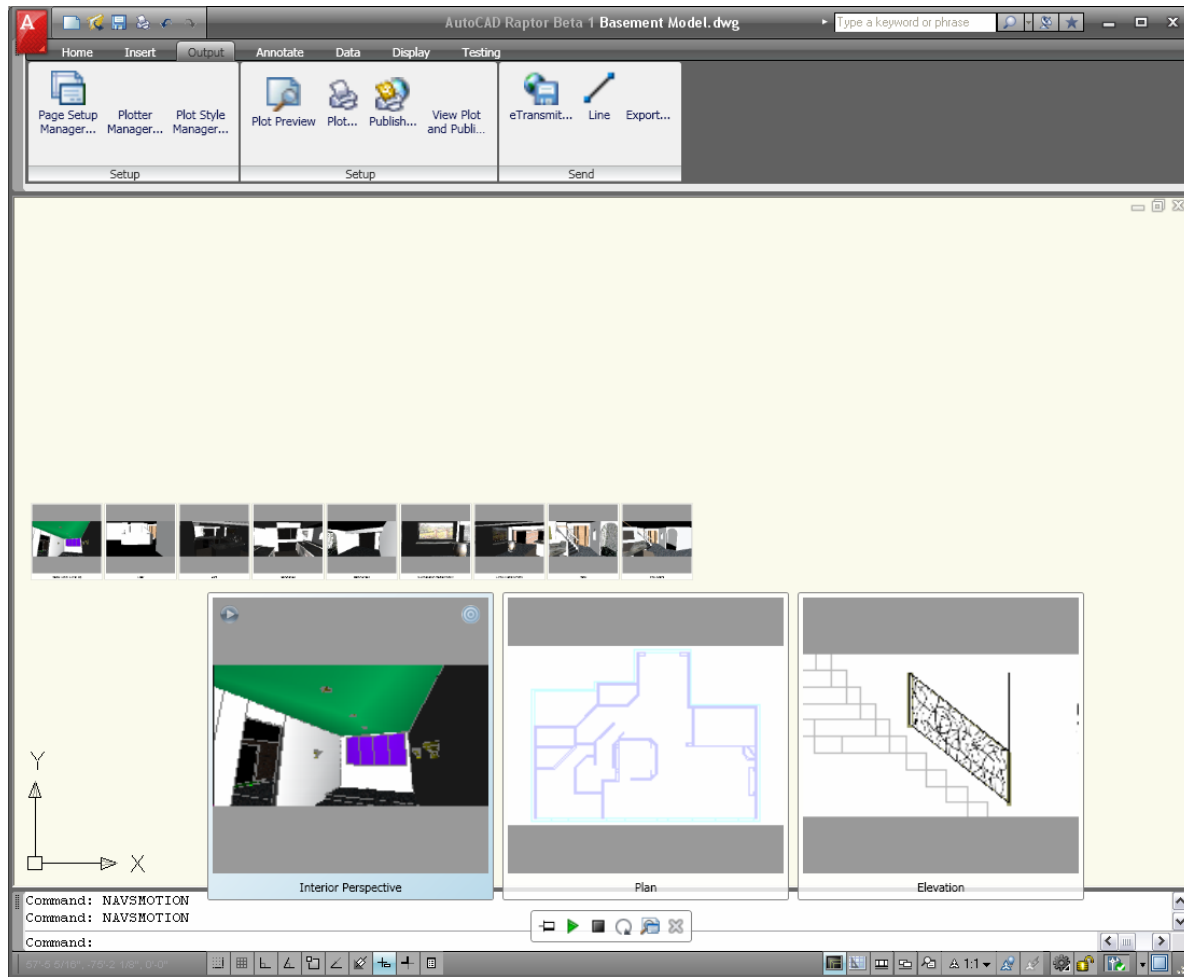
Figure 47. Find and Replace.

## Visualization

### Show Motion

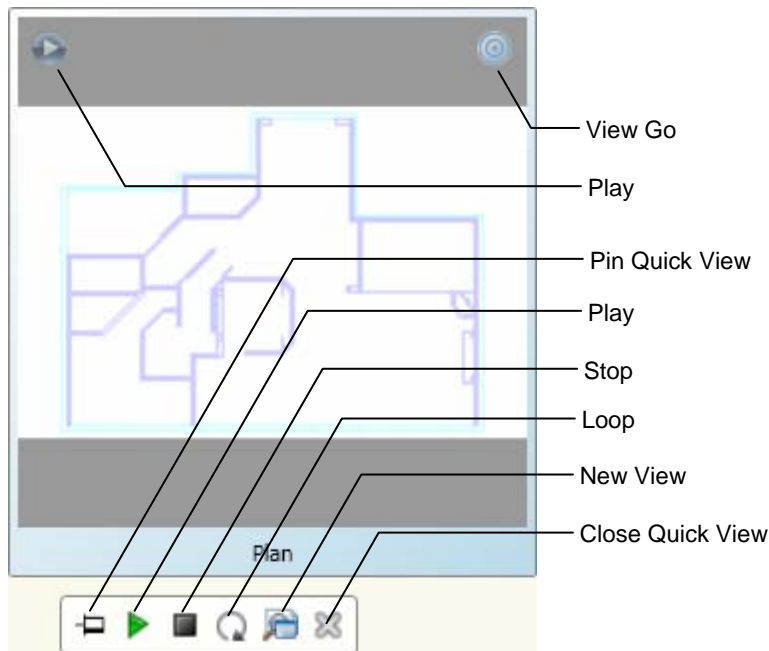
The Show Motion button, on the status bar, turns on the new Show Motion control panel displaying preview images of named views within the current drawing; grouped by view category. Similar to Quick View Layouts and Quick View Drawings, you can move the mouse past the edge of the image strip to view drawing images which extend beyond the screen. You can increase or decrease the size of the drawing preview images by pressing the Ctrl key while rolling the mouse wheel up or down.

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**Figure 48. Show Motion.**

Passing the cursor over a preview image displays the Play and View Go tools in the upper corners of the image. You can play an animation that automatically cycles through all the views in that category; pausing the animation if necessary. Additional tools are available in the Show Motion toolbar, which is automatically displayed when Show Motion is turned on. Using these tools you can pin the Show Motion bar open so that it remains visible while you work in the drawing editor. You can use the Close tool to turn off the Show Motion bar when you no longer want it displayed. The Play, Stop, and Loop buttons enable you to control the animation and the New View button displays the New View/Shot dialog box.

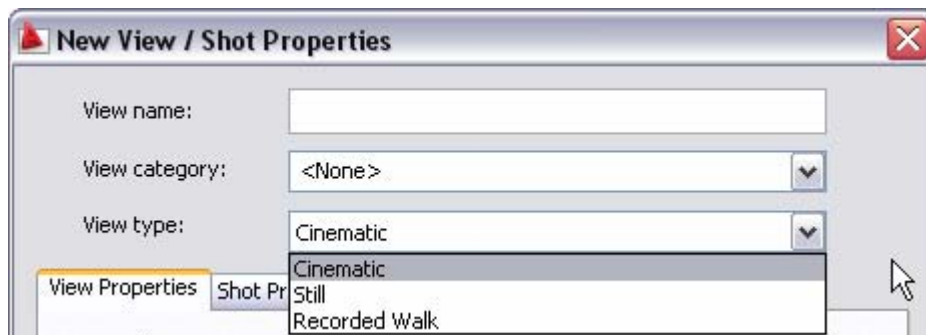


**Figure 49. Show Motion Tools.**

## View/Shot Properties

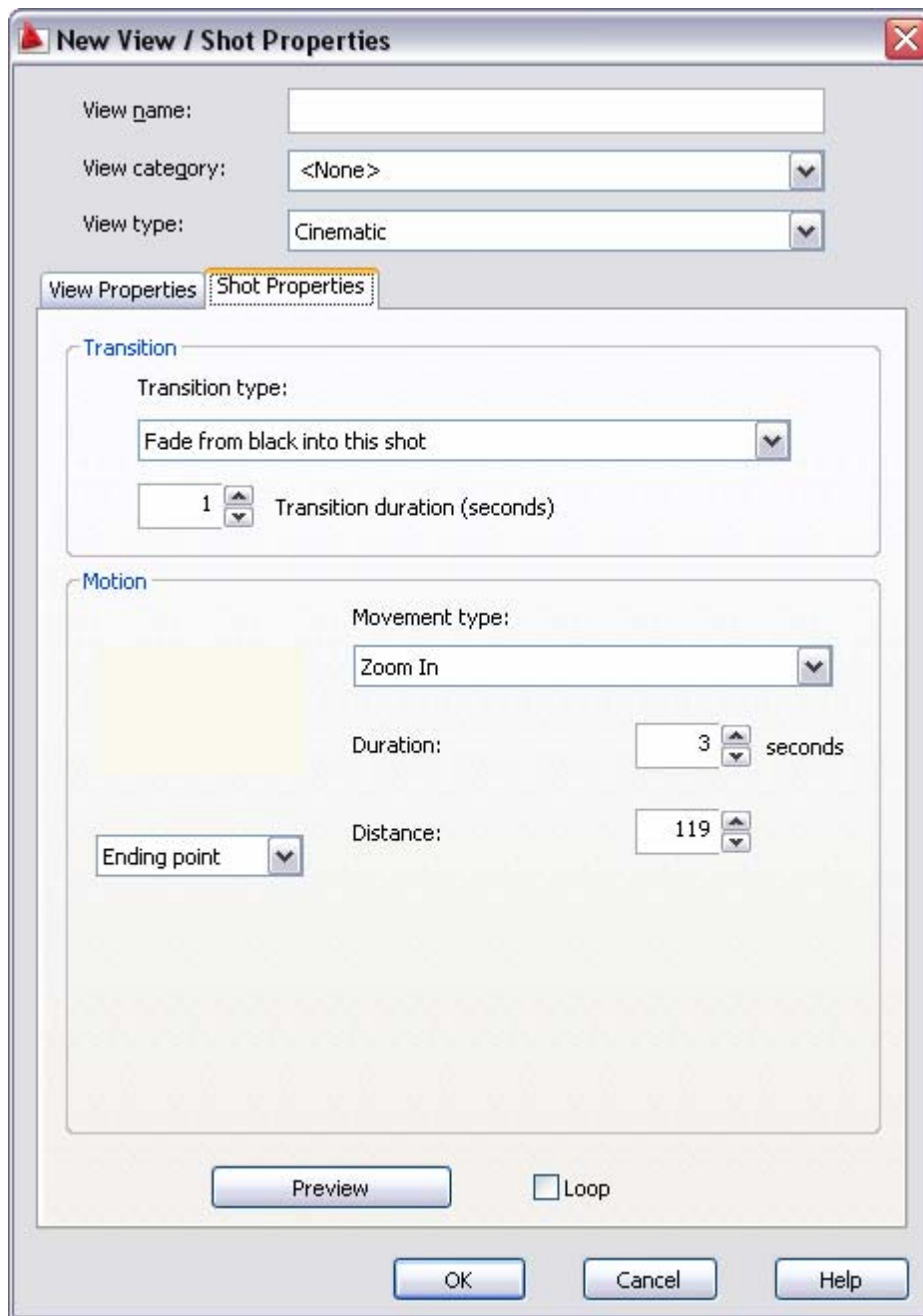
The New View dialog box, for creating named views, has been updated and renamed to support the new Show Motion functionality. Renamed New View/Shot Properties, it includes a new View Type property as well a new Shot Properties tab.

View types can include Cinematic, Still or Recorded Walk.



**Figure 50. View Type.**

The Shot Properties tab enables you to specify the duration and type of transition for named views. In addition to Transitions, cinematic view types can include motion such as zooming in or out, tracking left or right, and orbiting.



**Figure 51. Shot Properties.**

## Lighting

A new value in the VSLIGHTINGQUALITY system variable offers more control over the lighting quality in the current viewport. You can now set the value to 2 for per-pixel lighting.

## 3D Navigation Tools

Raptor includes two new tools to help you navigate 3D models with ease.

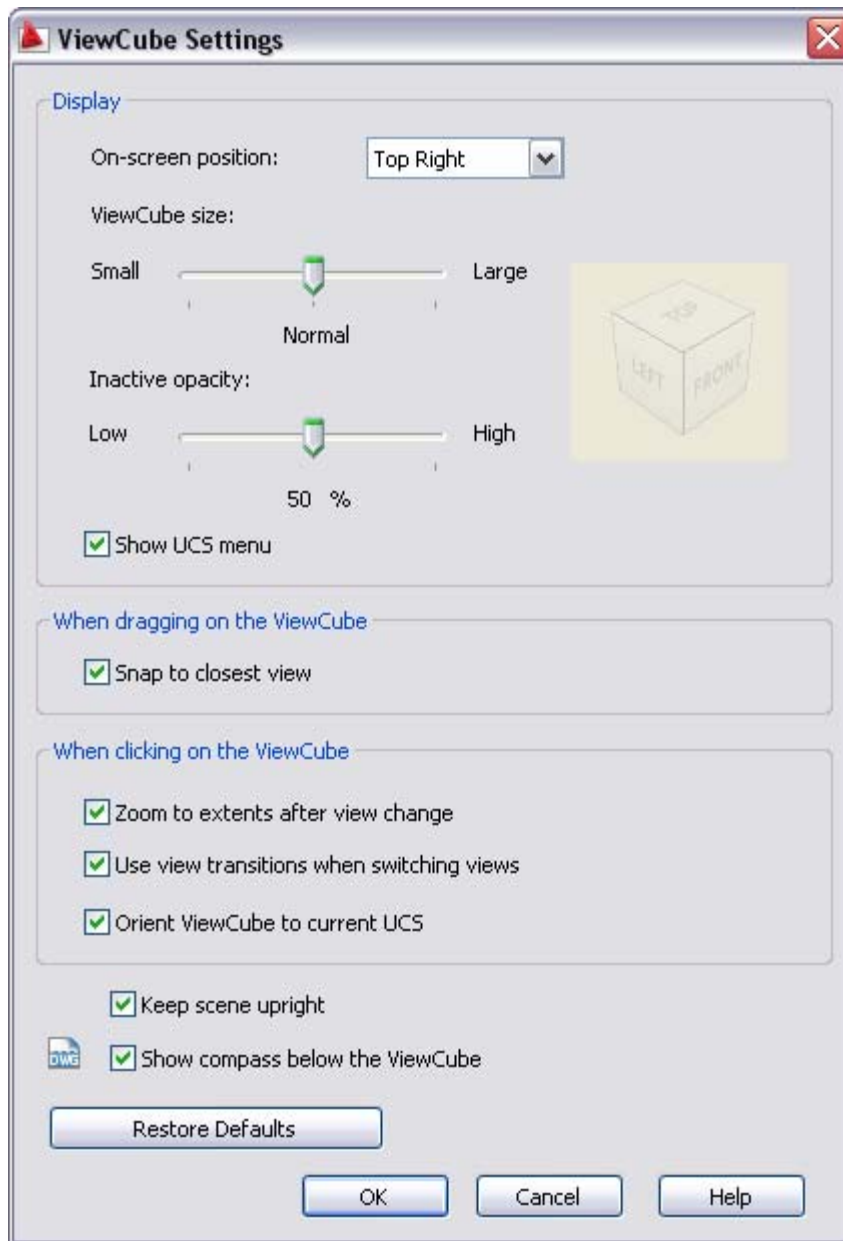
The new navigation cube, CUBE command, provides an intuitive interface for viewing your model from standard viewpoints. It includes hot spots that highlight as you pass your cursor over different parts of the cube. When you click on a hot spot, AutoCAD instantly restores the associated viewpoint. In addition to the predefined

viewpoints, you can click and drag the cursor on the cube to orbit the model freely. Regardless of how you change the viewpoint of your model, the cube icon automatically displays the current view orientation.



**Figure 52. Navigation Cube.**

You can control the display and behavior of the navigation cube using the View Cube Settings dialog box, which is accessible by right-clicking on the Cube and selecting Properties. In the View Cube Settings dialog box, you can specify the default location, size, and opacity of the cube.



**Figure 53. View Cube Settings.**

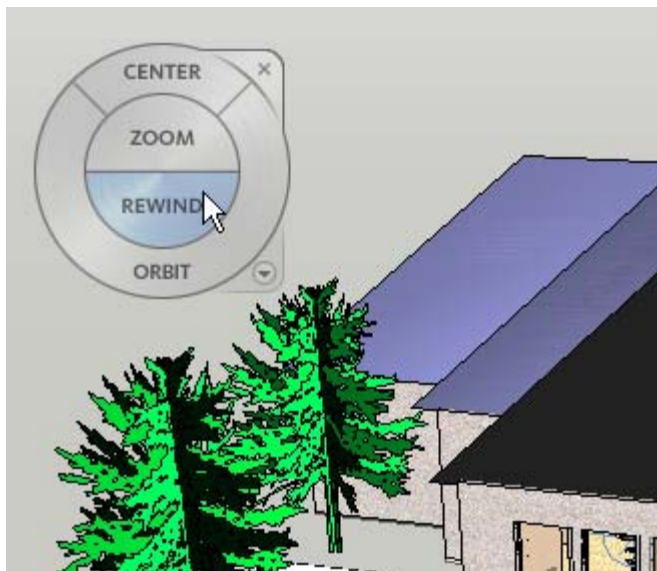
The new navigation wheel, accessible with the WHEEL command, displays a navigation wheel at the cursor for quick access to variety of navigation tools. A right-click menu provides options for different sizes and modes for the wheel.





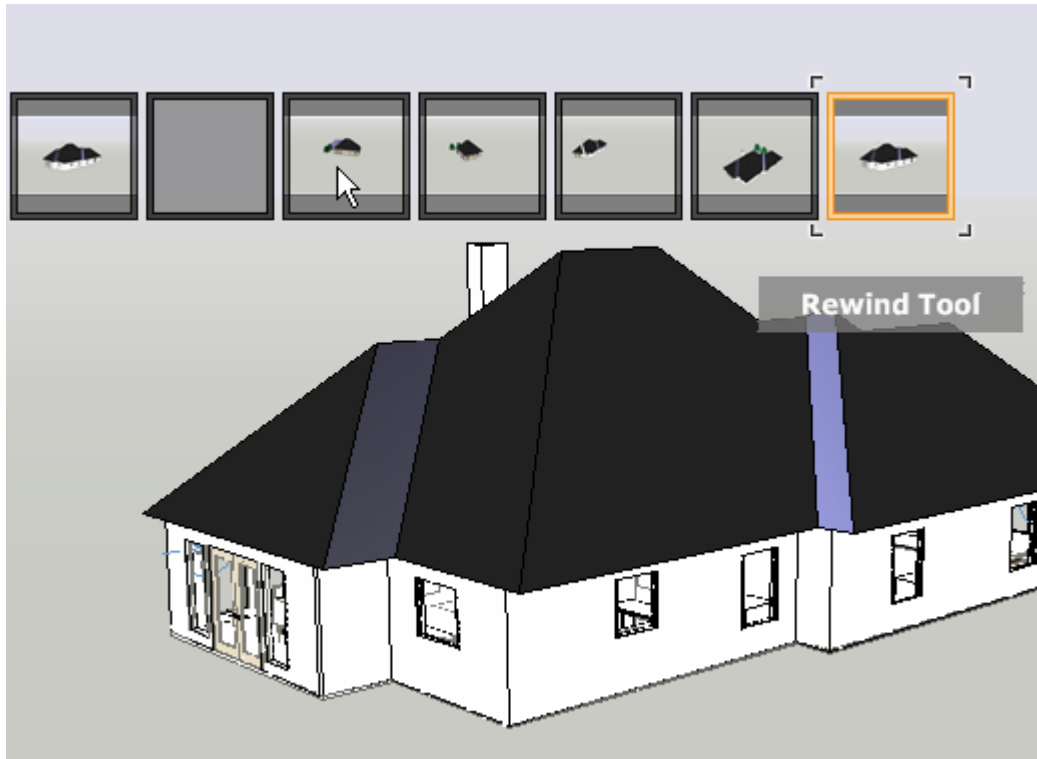
**Figure 54. Navigation Wheel.**

The View Object Wheel is ideal for navigating around a model. It includes common navigation tools such as Zoom and Orbit as well as an option to zoom the center of the display window toward the indicated location.



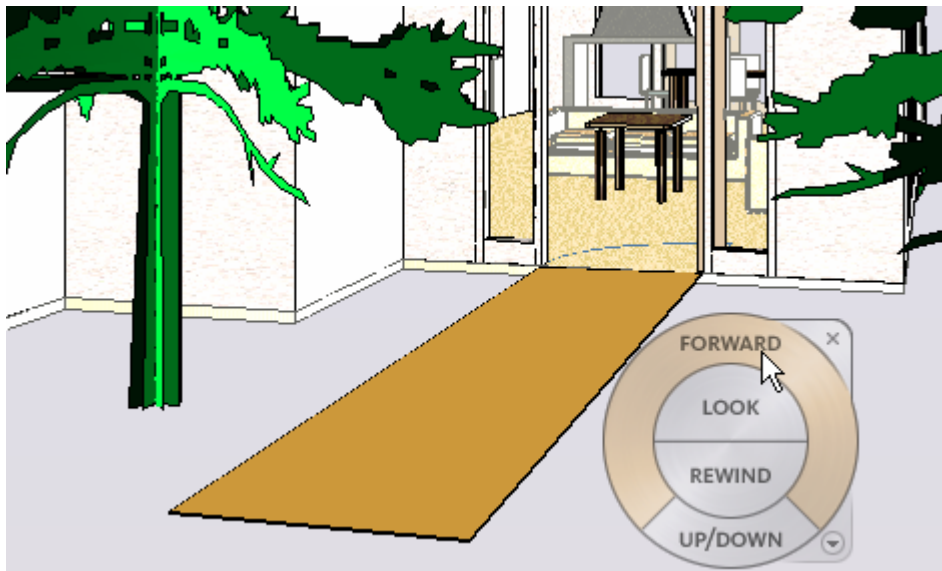
**Figure 55. View Object Wheel.**

The Rewind tool is particularly useful. It displays frames from previous view orientations enabling you to scroll back and quickly restore an appropriate view.



**Figure 56. Rewind Tool.**

The Tour Building Wheel is ideal for navigating the inside of building. It includes tools such as Forward, Look, and Up/Down in addition to the equally valuable Rewind tool.



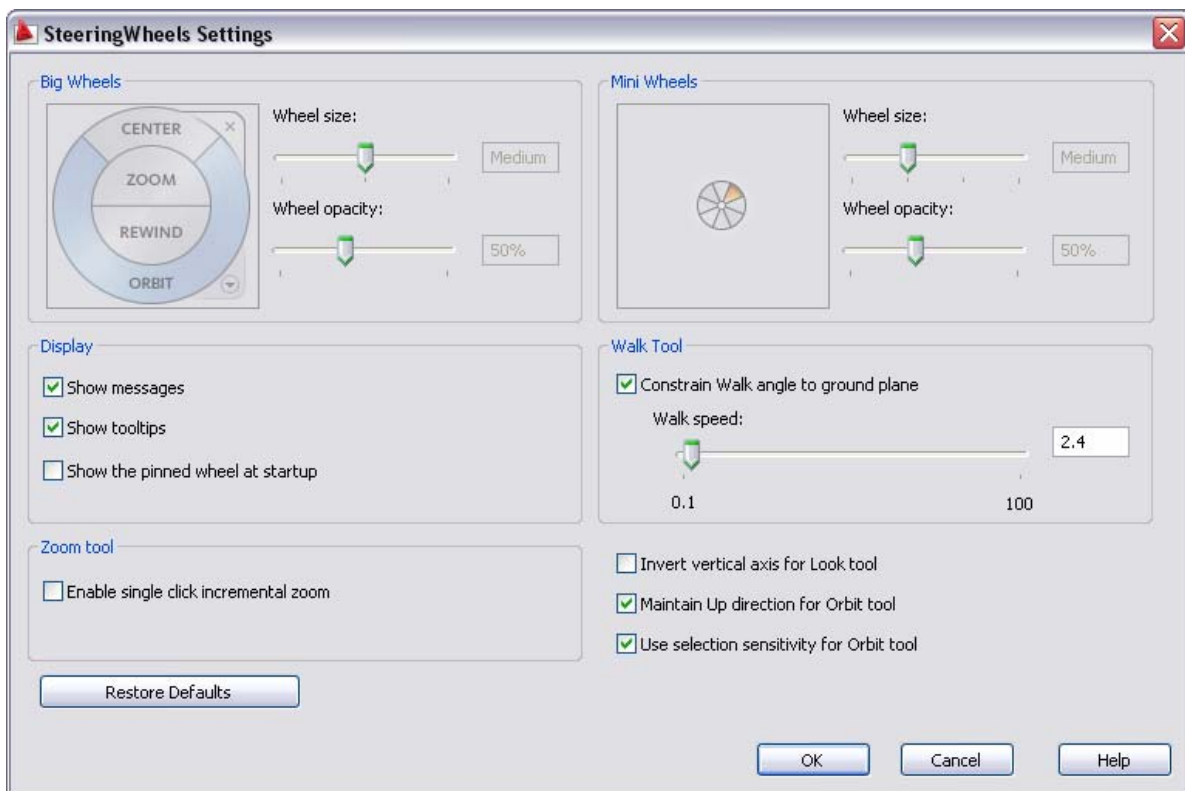
**Figure 57. Tour Building Wheel.**

The Full Navigation Wheel includes tools from both the View Object Wheel and the Tour Building Wheel, enabling you to select from a variety of tools on a single wheel.



**Figure 58. Full Navigation Wheel.**

You can customize the appearance and behavior of the navigation wheel using the Steering Wheel Settings dialog box, which is accessible from the Properties option on the right-click menu.



**Figure 59. Steering Wheels Settings.**