AUTODESK® AUTOCAD® 2018

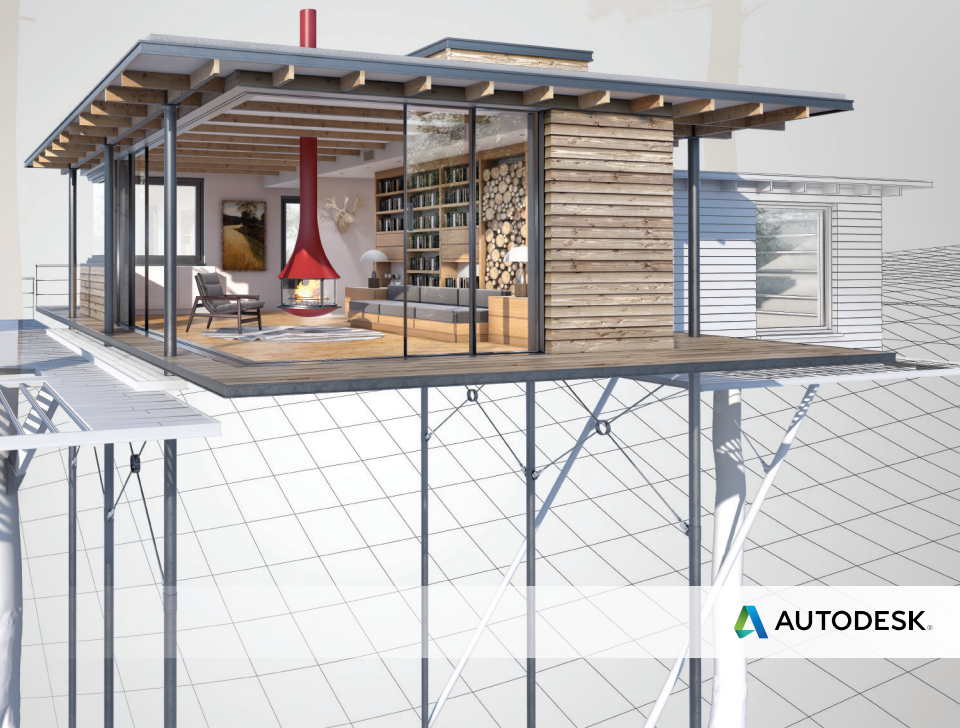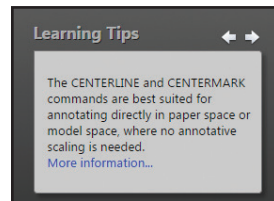# Lynn Allen's Tips and Tricks

AUTODESK®

User Interface

The User Interface in AutoCAD 2018 continues to improve the way you interact with AutoCAD.
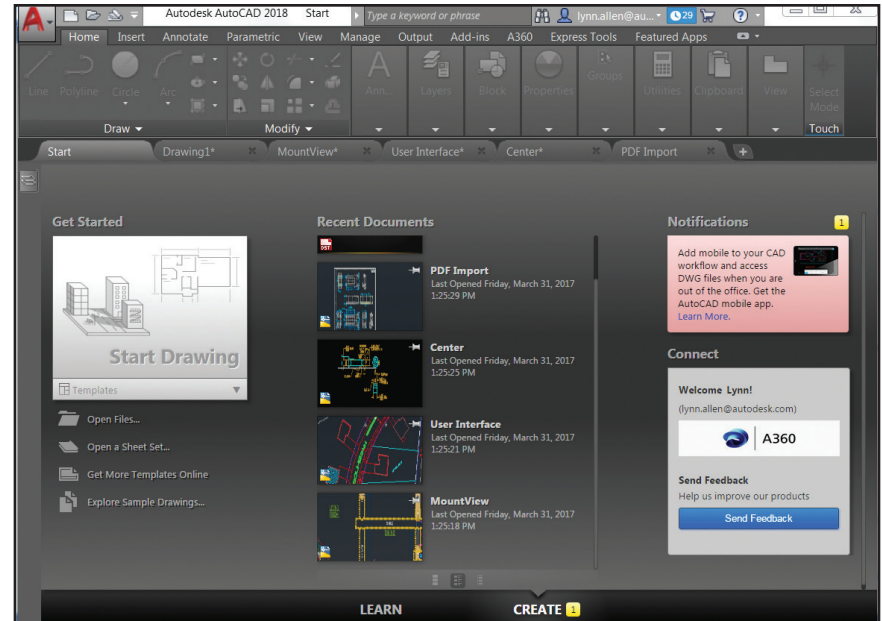
Start Tab

The Start tab is a friendly place to start a new drawing or open an existing drawing. It's also filled with tips, videos, and other valuable information.

Expand your AutoCAD knowledge by browsing the Learning Tips!

The plethora of productivity tools in AutoCAD 2018 is certain to provide a better design experience for everyone!

If for some reason you wish to turn off the Start tab - simply set STARTMODE to 0.

NOTE If you choose to turn the Start tab back on, you'll need to relaunch AutoCAD after setting STARTMODE back to 1.

Dialog Box Enhancements
The #3 AUGI wish list request has been granted! Many dialog boxes have an increased default size and are resizable. That means more information and less scrolling for you (and they even "remember" their previously set size!). Let's look at a few:

Edit Attributes (ATTEDIT) is increased to display 15 attributes at one time (compared to 8).
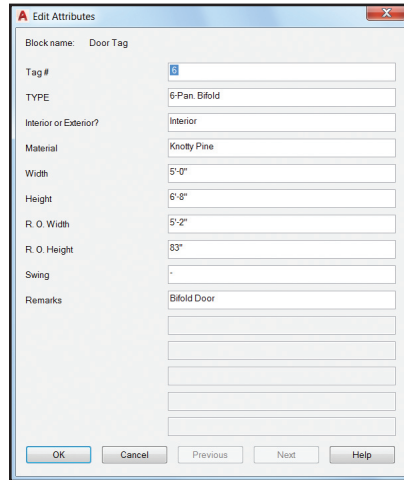
Insert is enlarged and resizable with a larger preview image—and it now supports AutoComplete! That means less typing and scrolling to select the correct block name.
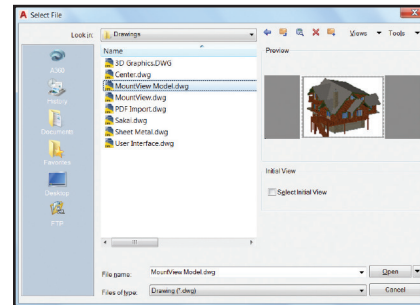
You'll find the preview pane is increased in the Select File dialog box (and the link to Buzzsaw® in the Places list is removed).

File Navigation Dialog Box
Used for operations such as Open, Save, and Attach, the File Navigation dialog box now remembers the previous sort order. So if you last sorted by date, it will automatically display the files by date the next time you access it.

Here's a list of the other improved dialog boxes:

Page Setup Manager, Object Grouping, Layer States Manager, Enhanced Attribute Editor, Move/Copy Layout, Drawing Properties, Load/Unload Applications, Drafting Settings (DSETTINGS) and Open VBA Project.

Security Options now trusts any files or folders under Program Files (which is under the operating system's UAC protection). Implicit Trusted paths are grayed out (before they weren't even displayed).
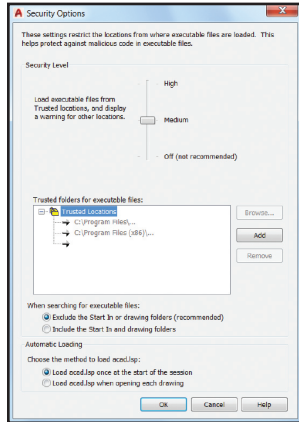
Drawing Units is updated to include US Survey Feet in the list of Insertion scale units.

NOTE US Survey Feet is not supported in previous AutoCAD versions.
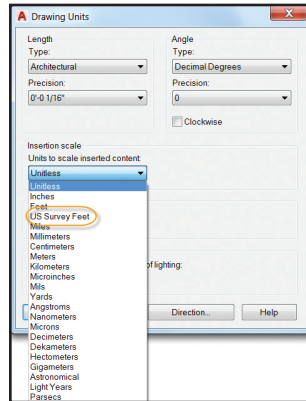
ToolTip Enhancements

Do you think ToolTips show up too quickly (or not quickly enough!)? Now you can set the exact number of seconds to delay before displaying rollover tool-tips. Customize this on the Display tab of Options.
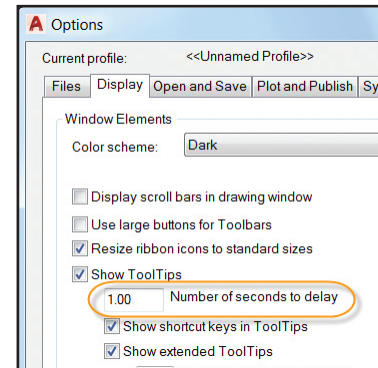
Quick Access Toolbar

One of my favorite tips is putting the Layer Control dropdown list on the Quick Access Toolbar–and now it's part of the Quick Access Toolbar menu for easy access! Be sure to turn it on as it's off by default.
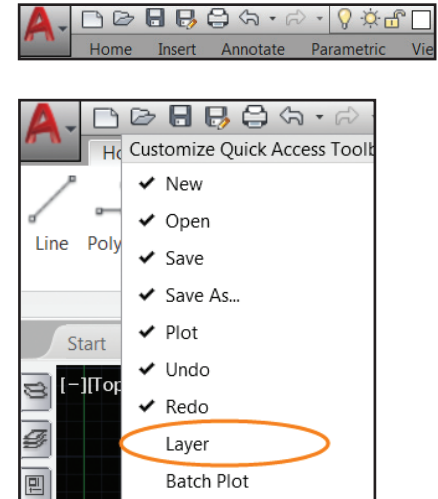
Status Bar

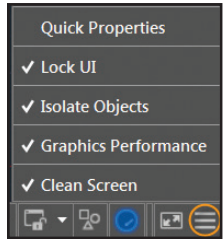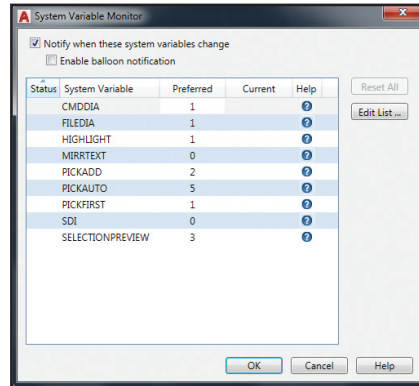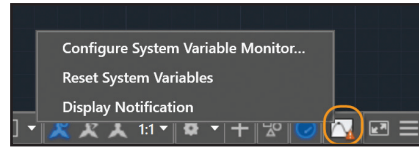Populate the Status bar with the tools you want by clicking on the three stacked lines (the "hamburger" menu) in the lower right-hand corner of the editor.

You'll also find options to enable balloon notifications or to configure the System Variable Monitor.

Improved Graphics

The appearance, selection, and performance of 2D geometry continues to improve in AutoCAD 2018, making your visual experience even better!

NOTE   To experience the performance increase you'll need a DirectX® 11-capable graphics card and your hardware acceleration turned on!

The Status bar will automatically wrap onto two rows when the icons can't fit into a single row.

The System Variable Monitor tool now has a right-click menu to quickly reset system variables to their preferred values (no need to open the System Variable Monitor dialog box!).
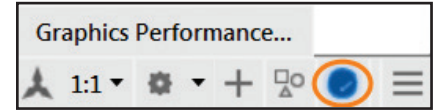
The High quality geometry option can be found in the Graphics Performance dialog box (available from the status bar).

If your hardware doesn't support High quality geometry (isn't DirectX® 11-capable), try using the Smooth line display for better graphics performance.

Appearance and Selection

Set LINEFADING to 1 to automatically fade geometry as you zoom into super-dense drawings. Control the amount of fading with LINEFADINGLEVEL.

Remember how the previewed objects often appeared jagged (while they're being created, moved, or copied)? Well not anymore!

Lines with "dot" linetypes were often difficult to see (even when you changed the lineweight!). Now you can actually see them in AutoCAD 2018!
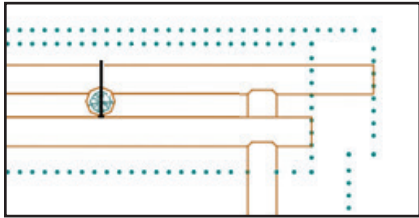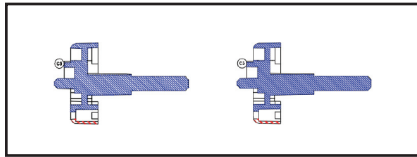

Linetypes with dash and dot combinations now display round dots (no more very short dashes!).

Parallel Hatch Lines

In AutoCAD 2018, closely spaced parallel hatch lines have more consistent line spacing, graphically.

You'll find that, in general, 2D and 3D performance is improved in AutoCAD 2018. Pan and Zoom operations are faster, and orbiting large 3D models with visual styles no longer results in adaptive degradation. If you've ever worked with models with a large number of small blocks containing edges and facets, you'll be pleasantly surprised at the improved performance!
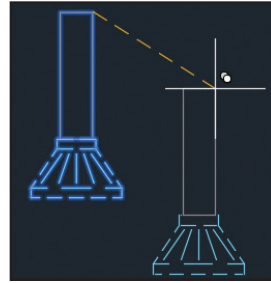
Rubber-Band Line Color

Do you care about the color of the rubber-band line that stretches dynamically within the drawing area when you're moving or copying objects?

If so, you can modify it from the Drawing Windows Colors dialog box (Options > Display > Colors button).
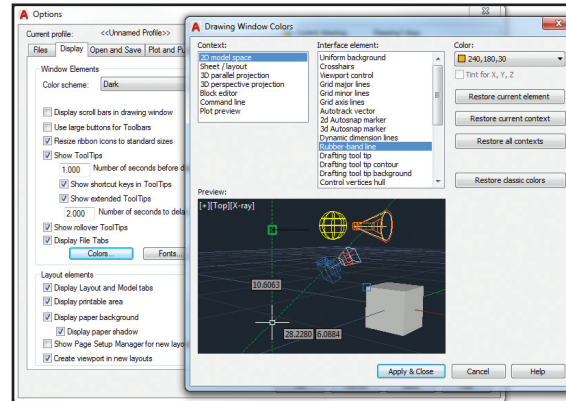
Object Selection

We spend so much of our AutoCAD time selecting and editing objects; check out these handy additions:

Off-screen Selection

Have you ever wanted to start a selection window in one part of your drawing—and then pan and/or zoom to another part of your drawing while maintaining the selection set?
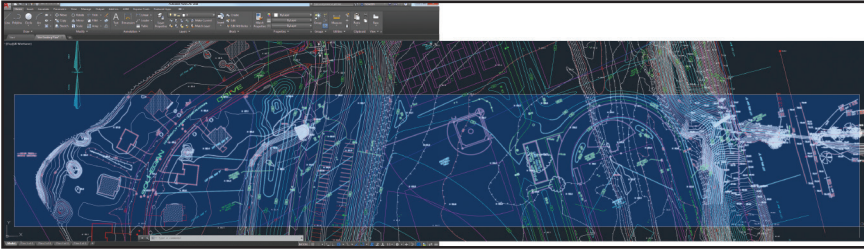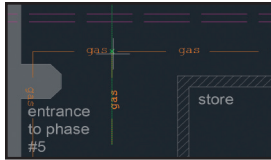Your wish is granted with the new SELECTIONOFFSCREEN system variable (set to 1).

Snapping to Gaps

Have you ever tried to select an object with a dash or dot linetype in the gap? No can do, right?

Now object selection and object snaps recognize gaps, allowing you to snap to objects even when picking on a blank space.

NOTE You must turn on the system variable LTGAPSELECTION to get this new behavior!

And with AutoCAD 2018, LTGAPSELECTION supports complex and DGN linetypes—and works with ALL objects (including polylines with width and splines).

Delete Key with PICKFIRST

Have you tried to delete highlighted objects with the Delete key (only to find that nothing happens?). You probably had PICKFIRST set to 0. A new message displays in AutoCAD 2018 to alert you to this and to allow you to turn PICKFIRST on.
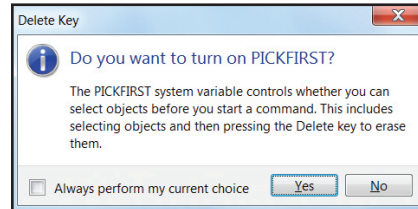
NOTE If this message starts to bother you, you can turn it off in Options > System > Hidden Messages Settings
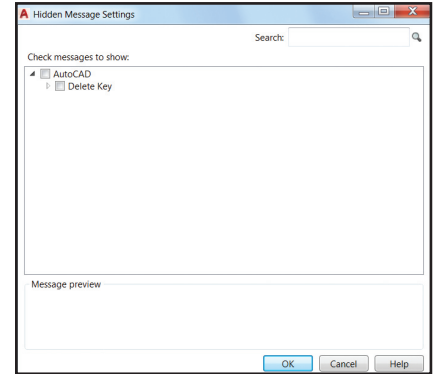
PDF Enhancements

Let's face it, we all work with PDF files! They're the most popular file format for exchanging all types of design information. Now you can import PDF data into AutoCAD as 2D geometry—one of the most requested wish list items has been granted!

Importing PDF Files

Use the PDF Import tool (Insert ribbon tab) to import geometry from a PDF page into the current drawing as Auto-CAD objects.
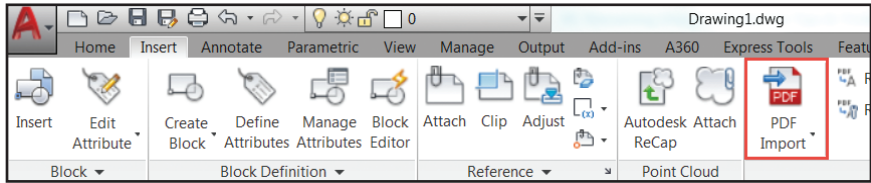
**TIP** You can also find PDF Import in the Application menu.

After selecting a PDF File, use the Import PDF dialog box to customize your import.

Choose which page from the PDF file to import (only one at a time please!)

· Specify scale, rotation, and insertion point
· Select what type of data you wish to import (vector geometry, solid fills, True Type fonts, raster images)
· Control layer results
· Use a variety of post-processing options for imported geometry.
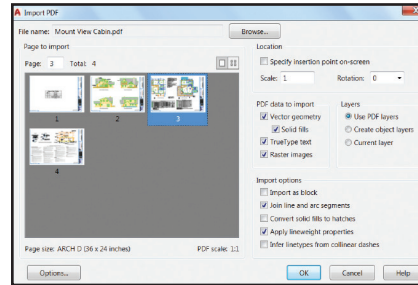
TIP Raster images are extracted as .png files (and attached). You can use the Options > Files tab to assign the file location for the image files.
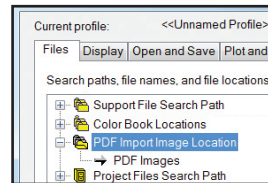
NOTE Converting solid fills to hatches could increase the processing time.

If you choose not to apply lineweight properties, AutoCAD will use the default lineweight.

Infer Linetypes from Collinear Dashes

When selected, AutoCAD will look at the collections of collinear dash and dot segments and replace them with a single polyline.

AutoCAD creates a dashed PDF_Import linetype based on the length of the dashes (some fidelity may be lost).

NOTE If unchecked, each segment in a dashed line is imported as a separate polyline (yikes!).

While TrueType fonts are imported as text objects, SHX text is not recognized, unfortunately, but will be imported as geometry. But not to worry—there's a tool to help fix that!
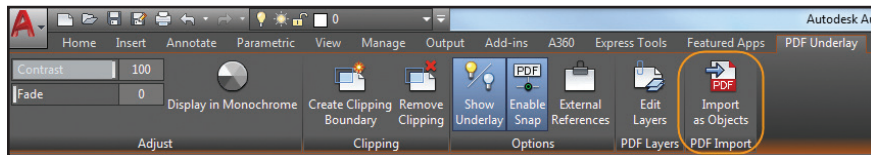
Importing PDF Underlays

The PDFIMPORT command also offers you the option of selecting an attached PDF underlay. You'll find this option in the contextual PDF Underlay ribbon tab.

You can specify a rectangular or polygonal boundary around the objects you want to import, or you can choose to import the entire underlay. Options to Keep, Detach, or Unload the underlay are also provided.

SHX Text Recognition

Since Adobe's PDF file format doesn't recognize SHX text, it doesn't make the round trip back into AutoCAD as text. Not to worry, though, as AutoCAD 2018 has some great tools to work around it!

Use the Recognize SHX Text Tool (PDFSHXTEXT command) to select imported PDF geometry representing SHX text and convert it to single-line Mtext objects.
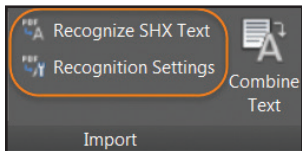
NOTE This tool compares the selection set with the selected SHX fonts found in Recognition Settings.

Use the Settings option to select the possible SHX fonts in the PDF (don't over select!). AutoCAD will compare the

geometry to the fonts in order–unless "Use best matching font" is selected.
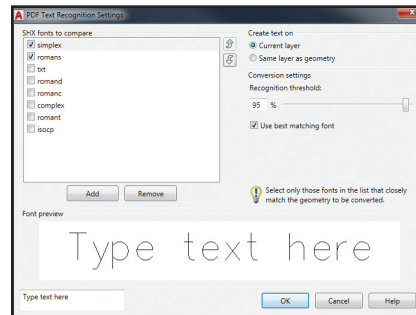
TIP If AutoCAD doesn't find a matching SHX font, try lowering the Recognition threshold.

If you aren't sure what a particular SHX font looks like, you can select the font and key in some sample text in the Text Recognition Settings dialog.

After AutoCAD does the compare, a message box will display the results.
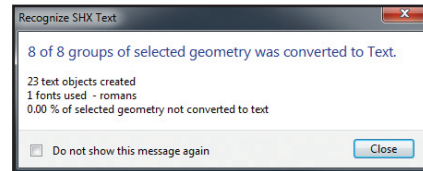
Combining Text with TXT2MTXT

After you convert the PDF geometry to SHX text, you might want to combine the individual mtext objects into one multi-line text object for easier editing. Use the Combine Text tool (TXT2MTXT) which is now handily available in the Import panel.
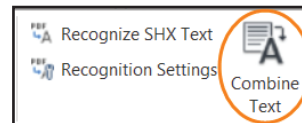
TXT2MTXT has been updated from an Express Tool and now works on Mtext

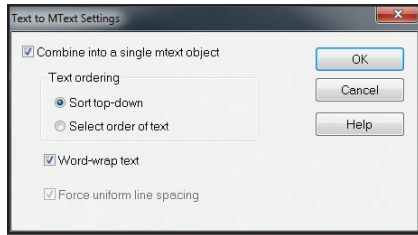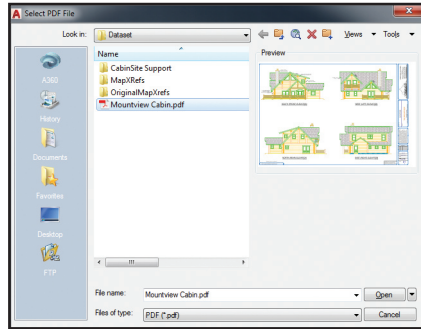and Dtext objects. You'll also find that it's smarter than ever!

Use the Settings option to fine-tune the results.

TIP Check out the new "Force uniform line spacing" option.

Other PDF Enhancements:

· Now we get thumbnail previews of PDF files in PDFIMPORT and PDFATTACH

· Improved scaling of PDF geometry from layouts
· Better form data support from importing PDFs

External References

External references are a powerful feature in AutoCAD. AutoCAD 2018 makes it easier than ever to keep them connected!

Broken Reference Paths

When you attach an XREF, the default path type is now set to Relative (as opposed to Full path). Don't like that? Set REFPATHTYPE to 0 for No path, 1 for Relative, and 2 for Full path.
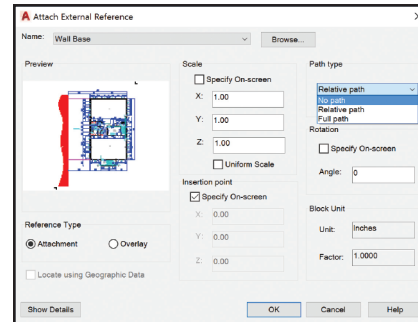
Ever tried to assign a relative path to a reference file when the host drawing is unnamed (or not saved)? Just not possible–until now! If you select the XREF in the External References palette, the Saved Path column will display a full path with an asterisk (*) prefix.

This indicates that a change will take place when you save the host drawing– and a property in the Details pane also clues you in that it is pending a relative path.
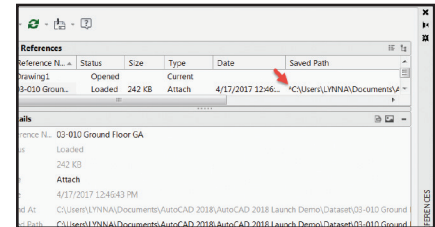
If you have relative references in the current drawing and you save it to a different location, AutoCAD will prompt you to update the relative paths (let's keep everything straight!).
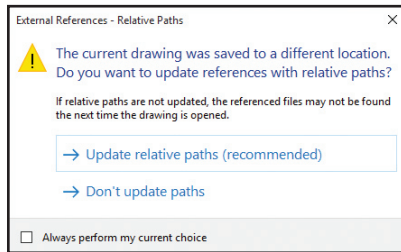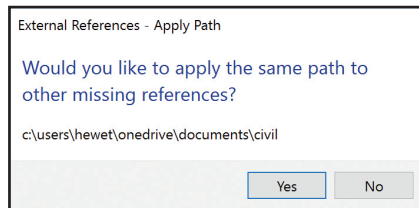

If you right click on a reference file that is not found, you have two new options: Select New Path, or Find and Replace.
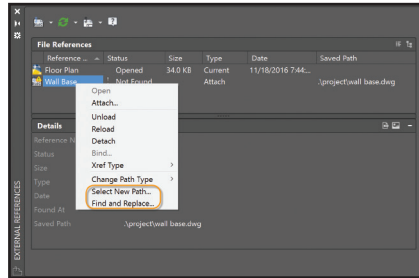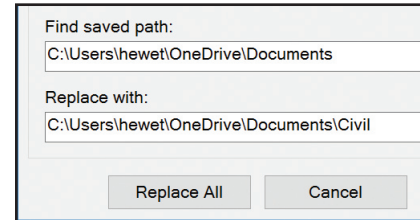
Use Select New Path to browse to a new location to find the missing XREF.

TIP You can even apply the same new location for other missing references (fix all!). Now that's a timesaver!

Find and Replace does exactly what it sounds like it does: locates all references that use a specified path from the selected references—and replaces them with a new path.

Now it's perfectly clear when changing the path type (from absolute to relative or vice versa) from the right-click menu (or toolbar menu). The current path type is disabled so there's no confusion!

Child References

Nested (child) references now display as Orphaned (poor reference) if the parent reference is Unloaded or Not Found.
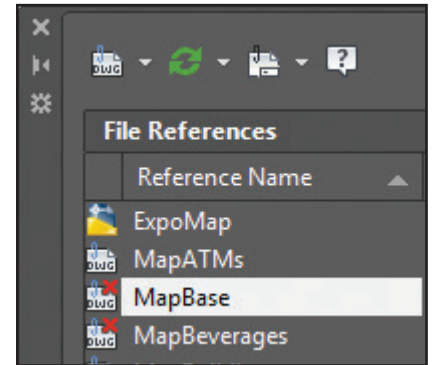
But they still display in the proper tree view location to help you figure out what went wrong!

TIP The Open option is now available when you right-click on an unloaded reference in the XREF palette so you can quickly open unloaded reference files!

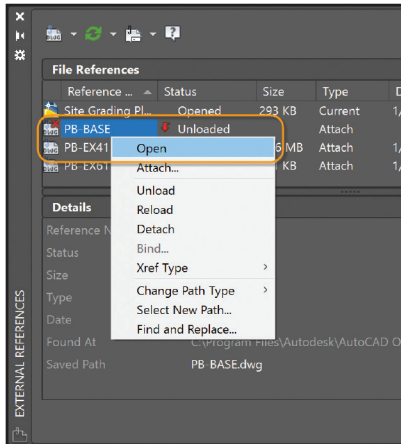**TIMESAVER** If you rename an unloaded XREF in the External References Palette, it doesn't automatically reload (until you tell it to!).

Less Stressful Syntax

We all know the dreaded "Number of missing reference files" warning that makes it sound like our XREFs belong on a milk carton. AutoCAD has softened the statement for clarity, and now it says "Number of reference files that are Not Found" (so at least it sounds like there's hope).
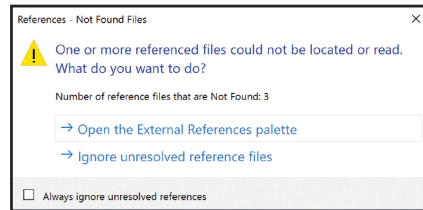
Annotation
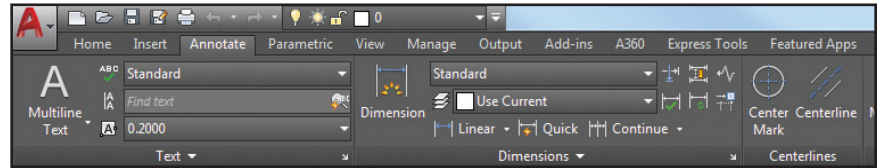
Annotation is an important part of our designs—check out these timesavers!

Default Dimension Layer

Stop wasting time! Set a Default dimension layer with the DIMLAYER system variable, or by selecting the Dim layer override.
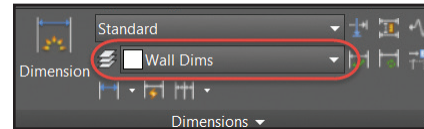
Hatch Layer

The HPLAYER system variable can be used to set a default hatch layer. Now you can specify a non-existing layer and HPLAYER will create the new layer and use it as your default for new hatches and fills.

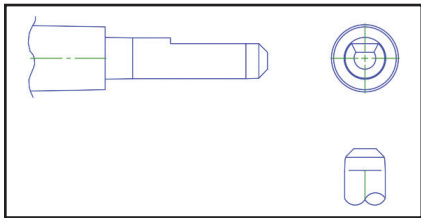## Associative Centerlines and Center Marks

Now it's easy to create customized associative centerlines and center marks!

Find these powerful tools on the Annotate ribbon tab.

Centerline: Create centerline geometry (of a specified linetype) associated with selected lines and polylines.

Center Mark: Create an associative center mark at the center of a selected circle, arc or polyarc.


TIP If you move or scale the associated objects, the centerlines and center marks update accordingly!

CENTERDISASSOCIATE: Disassociates centerlines and center marks from their respective objects.
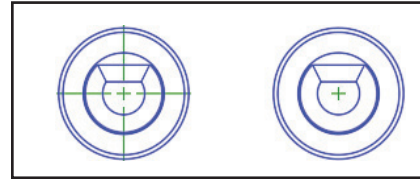
CENTERREASSOCIATE: Reassociates centerlines and center marks with selected objects.

Centerline and Center Mark System Variables

CENTEREXE: Controls the length the extension line overshoots.
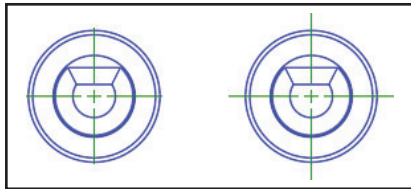
CENTERMARKEXE: Determines whether extension lines are created (center marks).

TIP Use the CENTERRESET command at any time to reset the extension lines of a center mark or centerline object to the current value of CENTEREXE.

CENTERLTSCALE: Sets the linetype scale.
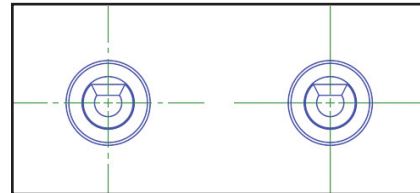
CENTERLTYPE: Specifies the linetype.

CENTERLAYER: Specifies the layer for centerlines and center marks.

CENTERCROSSSIZE: Used to set the size of the central cross (center marks).
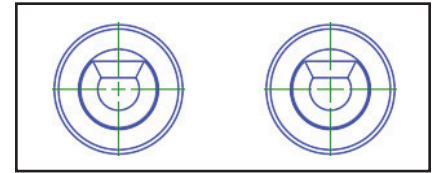
CENTERCROSSGAP: Sets the extension line gap between the central cross and the extension line (center marks).

TIP Modify centerlines and center marks with grips. Use the multifunctional grip menu for additional controls.

You can also use the Properties palette to view and edit centerline and center mark properties.

TEXTEDIT

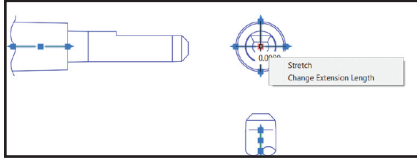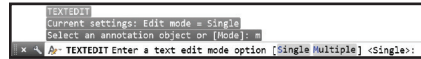Want to perform multiple text edits at one time? Use the new "multiple" option in the TEXTEDIT command and avoid all those tedious enters!

You'll also find a handy Undo option within Multiple mode so you can undo Individual text edits.

NOTE If you leave TEXTEDIT and perform an undo, all of the edits within the TEXTEDIT will be undone.
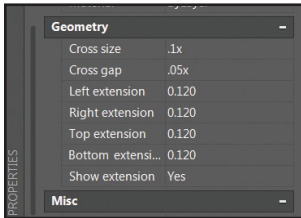
Coordination Model

Navisworks

Did you know you can attach coordination models to a drawing? The Attach command and the Xref Manager have options for Autodesk® Navisworks® files (NWD or NWC).
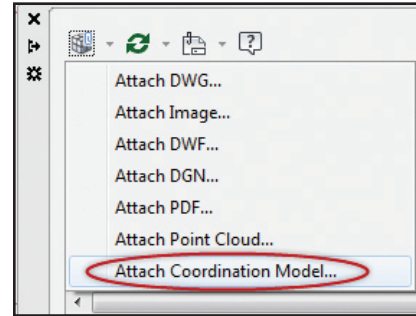
AutoCAD 2018 has the ability to snap to precise locations on an attached coordination model using the 2D endpoint and center object snaps!
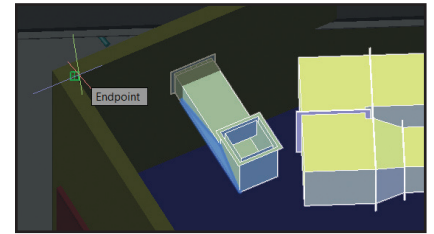
NOTE / TIP You can also attach Navisworks files using the CMATTACH command.

The Attach Coordination Model dialog box contains typical controls such as path type, insertion point, and more.
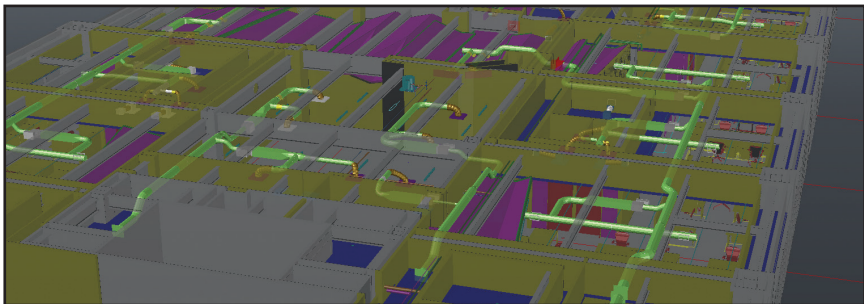
Selecting the coordination model displays the contextual ribbon tab with options to control the display through fading.

To attach coordination models, you need a 64-bit system and hardware acceleration must be on.

A360

It's all about the cloud, baby! Connect to your secure A360 account for design view sharing, customization syncing, project management, and more.

A360 Ribbon Tab

You'll find some new tools in the A360 tab, as well as the removal of some obsolete and less frequently used tools. Design Feed is no longer displayed, but you can still access it with the DESIGN-FEEDOPEN command.
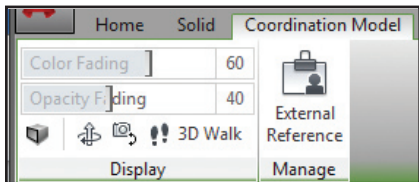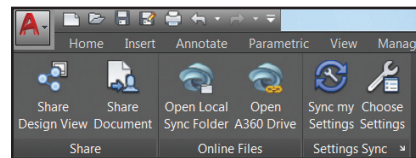

Share Design View

AutoCAD 2018 offers this great tool to easily publish views of your drawings to the cloud, and share with others while protecting your DWG file. Stakeholders viewing the design don't even need to log into A360 or have an AutoCAD based product!

TIP You can also find Design Views under Publish in the Application Menu or use the ONLINEDESIGNSHARE command.

NOTE You must be logged into A360 to publish design views.

The Share Design View tool uploads your current drawing to a secure location in the cloud where 2D and 3D views are extracted along with the property database. You choose to publish and display in your browser right away (and wait) or receive a notification when all view processing is complete.
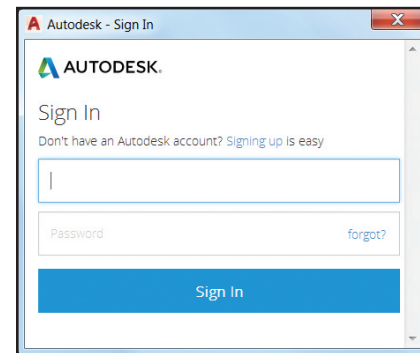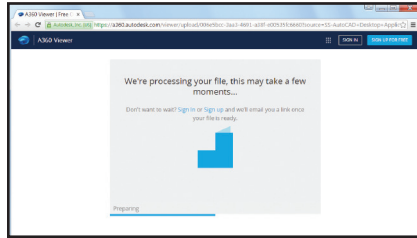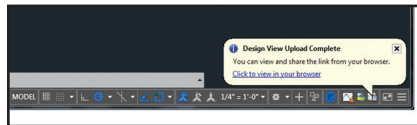

If you choose to publish and display now, AutoCAD launches your browser where you can see the status in the A360 viewer.

TIP Factors that affect the publishing speed are internet speed, backlogged queues, and the complexity of the drawing.

If you choose the option to publish and be notified when processing is complete, you'll receive a bubble notification with a link to display the design view in your browser.

NOTE Closing the browser before the processing is complete doesn't cancel the operation.

Once in the A360 viewer you can zoom, pan, measure, display object properties, control layer visibility and more.

TIP In addition to sharing your design views, you can post, review, and resolve comments.
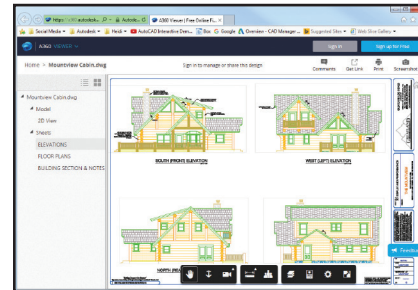
Once you have the design view you want, you can easily share a link to the design view with other users.

NOTE This link stays valid for 30 days (and has no log on requirements!). You can extend a design view for an additional 30 days at any time, indefinitely.

You can easily access your recent uploads from the A360 viewer homepage.

Installing AutoCAD

New License Manager

It's easier to change between license types and save your work should your network license lose connection with the License Manager.

No need to input license type and serial number during the installation process. Now you provide this information when you first launch AutoCAD. Choose between a Serial Number (stand-alone) and a Network License.
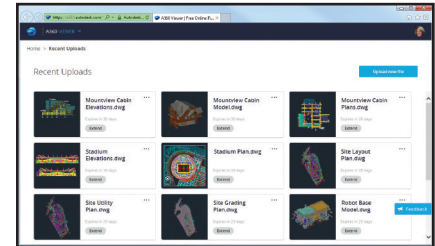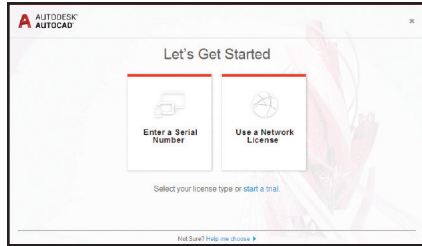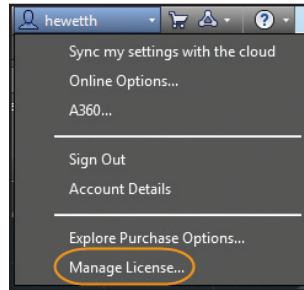
Infocenter has a new License Manager option so you can view your software license info and installed plug-ins, add-ons, and extensions.

TIP   Here you can also change the type of license (stand-alone or network) or input a new serial number.

If you select network license, AutoCAD will allow you to check out a license for up to 6 months so you can use it offline.

If you are online using the license server and you lose your connection to the network at any time, AutoCAD will give you an error message and a timer that doesn't begin until you dismiss the message. This should give you plenty of time to save your work!

Smooth Migration

Use the new Migrate Custom Settings tool to migrate your custom settings and files from a previous release to Auto-CAD 2018.

The sleek and informative interface makes it easier to detect and clearly identify customized settings for migrating.

Autodesk Desktop App

The Autodesk desktop app delivers security patches and updates for all Autodesk products (2015-2018). It is subscription aware, and delivers updates and learning content for products under subscription.

NOTE A shortcut for the Autodesk desktop app is installed on your desktop and taskbar.

NOTE Be sure to sign in to your Autodesk account to get the most value out of the app.

When any type of update becomes available, a notification will appear on the system tray. Simply launch the Autodesk desktop app to get more info on the update, and install it if desired.

TIP You can also access the Migrate Custom Settings tool from the Windows Start menu (but AutoCAD cannot be running). If you change your mind, you'll find a "Reset Setting to Default" option there.

The updated summary report offers more information in an easier-to-read format.

3D Printing

It seems that 3D Printing is all around us! AutoCAD 2018 is making it easier than ever for you to send your designs to a 3D printer.

Send to 3D Print Service

Under Publish in the Application menu you'll find the Send to 3D Print Service (formerly 3DPrint) option.

Alternately, under Print in the Application menu, you can choose the 3D Print (Print Studio) option (the new 3DPrint command). Both of these tools are available on the Output ribbon tab when using a 3D workspace.

Technology and Performance
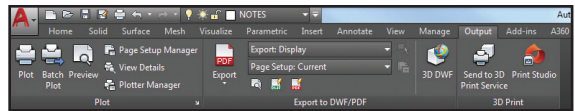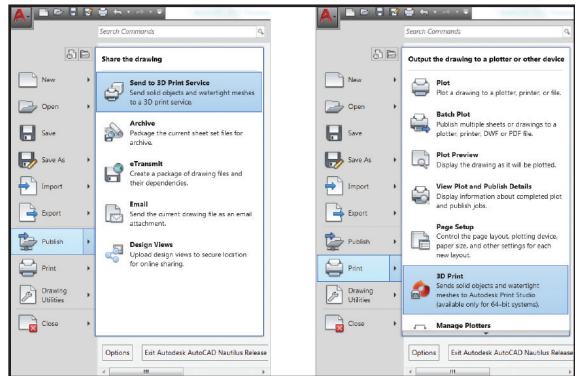
Print Options

However you choose to get there, you'll end up in the 3D Print Options dialog box where you can control a variety of settings including the output dimensions.

After hitting OK, you'll be asked to save the output file to STL format so you can send it to a 3D Print Service.
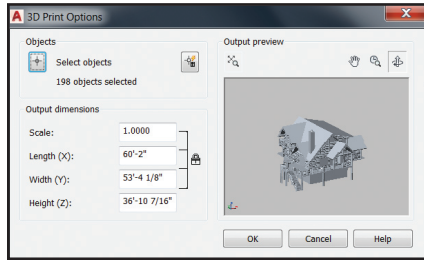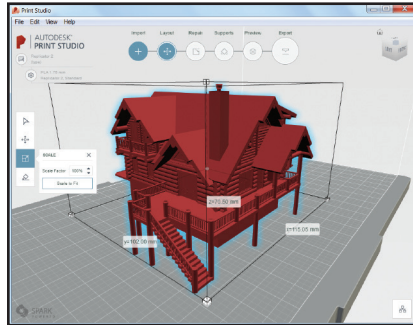
Print Studio

If you chose Print Studio, you'll have access to additional tools to prep your model for printing success when sending to your 3D printer. Print Studio helps you get your 3D prints correct the first time—saving time and materials!

NOTE Print Studio is a separate application that is not installed by default. If you haven't previously installed it, you will be prompted to do so.

DWG Format

It was bound to happen—the DWG format has changed with AutoCAD 2018. This change provides improvements to the efficiency of Open and Save (especially for those files with many annotative objects and viewports). 3D solid and surface creation will also be able to take advantage of the newest geometric modeler.

TIMESAVER Automatic save functionality is performed incrementally more often than those lengthy full saves.

High Resolution (4K) Monitor Support

Better support for high resolution monitors continues in AutoCAD 2018. Commonly used UI elements such as the Start tab, Command line, palettes, and others are appropriately scaled and displayed as per the Windows setting.

REGEN3

This top secret command rebuilds all the graphics in a drawing to repair anomalies in the display of 3D solids and surfaces.

2D Display and Performance

An update to Graphics Performance lets you turn off smooth line display while still taking advantage of the High quality geometry option (especially handy for 4K monitors)

Bing Map Services

AutoCAD 2018 now supports Bing Maps v8.0 for its Online Map functionality.

AutoCAD: Continuous Innovation

Autodesk continues to transition in how we deliver value to our customers. We're changing to help customers embrace the new era of design innovation, help businesses stay competitive in the era of connection, and deliver continuous, incremental product value.

The AutoCAD 2018 Experience Allows You To:

- **Simplify** licensing, access, updates, and versions, so you can focus on your designs and collaborate better.
- **Personalize** your AutoCAD to fit the way you and your colleagues work, with no disruptions.
- **Connect** and collaborate on your designs from any device or platform around the world.
- **Innovate** with one of the industry's leading design tools backed by more than 35 years of technological breakthroughs and quality you can trust.

Simplify Software Management with AutoCAD

When you subscribe to AutoCAD, you have access to the latest updates and releases on a termed basis, to help you spend less up front and meet project needs:

- Stay current with the most recent releases and automatically receive updates.
- Receive setup support from Autodesk to get you up and running quickly.
- Access Autodesk® A360 project collaboration software and the AutoCAD mobile app.*
- Enjoy flexible licensing rights and scale up or down depending on your workload.

## Take the Power of AutoCAD Wherever You Go with AutoCAD Mobile

The AutoCAD mobile app is included when you subscribe to AutoCAD soft-

ware. AutoCAD mobile is an easy-to-use drawing and drafting app that allows you to create, view, edit, and share AutoCAD drawings on your phone or tablet at job sites, client offices, or anywhere else you are. AutoCAD mobile comes with advanced features like:

- Markup, add text, and make changes to drawings in real time.
- Create drawings with touch gestures or a stylus, and draw shapes with Object Snap.
- Access advanced layer management, measuring, and annotation tools.
- Connect to external cloud storage (Google Drive, Dropbox, etc.)
- Work offline and sync changes when back online.

The AutoCAD mobile app can be downloaded from the Apple App Store, Google Play Store, or Windows App Store.

NOTE This benefit is not available to AutoCAD customers on a maintenance plan or a perpetual license. Those who do not subscribe to AutoCAD can purchase a stand-alone subscription to the mobile app.
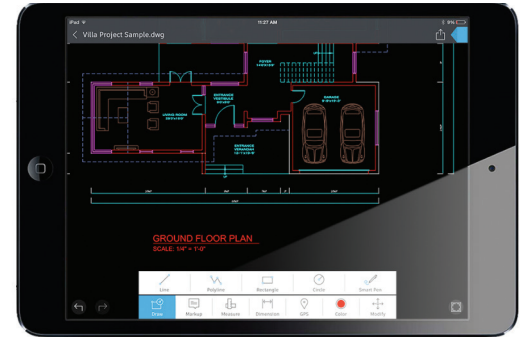
Lynn Allen, Cadalyst columnist and Autodesk Technical Evangelist, speaks to more than 20,000 users worldwide each year. For over 25 years she wrote an AutoCAD focused column for *Cadalyst* magazine called "Circles and Lines" and is the voice behind the popular Cadalyst videos "Tips and Tricks with Lynn Allen". Lynn started using Autodesk software over 25 years ago, and taught at the corporate and collegiate level for 13 years before joining Autodesk. A sought-after public speaker with a unique comedic style, Lynn is always one of the highest-rated presenters at Autodesk University, where she has also had the most popular class for over ten years. Active in social media with over 20,000 Twitter followers, she is also the author of three AutoCAD books, her latest entitled *AutoCAD Professional Tips and Techniques*.

AUTODESK.