NEMETSCHEK Vectorworks

What's New in Vectorworks 2010

What's New in
Vectorworks 2010

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Please refer to this guide below to find out what features are in your Vectorworks product.

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Introducing Vectorworks 2010: Making Change Easy

Nemetschek North America has a tradition of designing flexible, versatile, intuitive, and affordable CAD and BIM solutions. We've examined Vectorworks® from front to back, upside down, and inside out, and we're excited to deliver an upgrade that we believe you truly don't want to miss.

Behold Vectorworks 2010! You'll notice significant improvements like the unified 3D modeling environment; easy-to-use 2D, Dimensional Constraint Manager (DCM) from Siemens PLM; great new architectural, landscaping, and entertainment design features; new rendering functionality; and many important usability changes, all built upon the Parasolid® modeling core. This is no ordinary year. Change is happening everywhere. With Vectorworks 2010, change is easy.

Improved Modeling

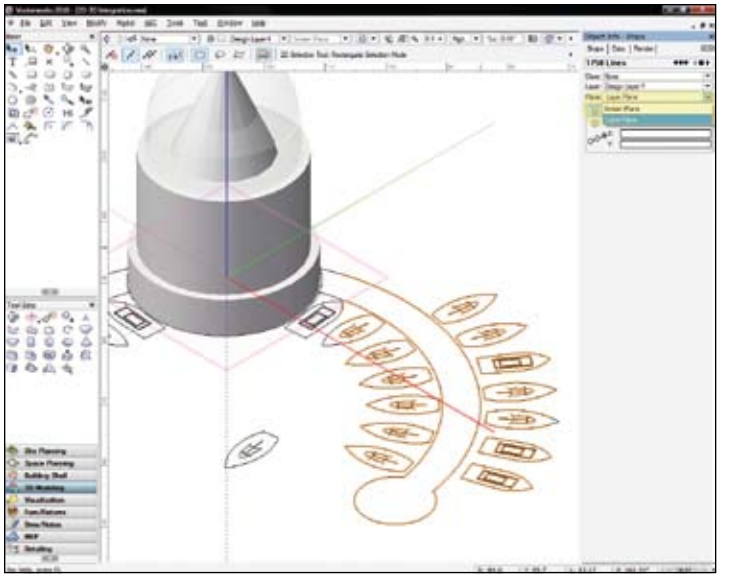
With Vectorworks 2010, we're unveiling a significantly more efficient modeling application. A vastly improved 3D environment makes it much easier to create, edit, and visualize your design, while a new foundation for constraints and object association delivers a robust and reliable drawing experience. You'll find many enhancements, such as: improved working planes, better snapping in 3D views, 2D objects represented as planar graphics, interactive dimension editing, and 3D and hybrid objects with a unified coordinate system, to name just a few.

3D Environment

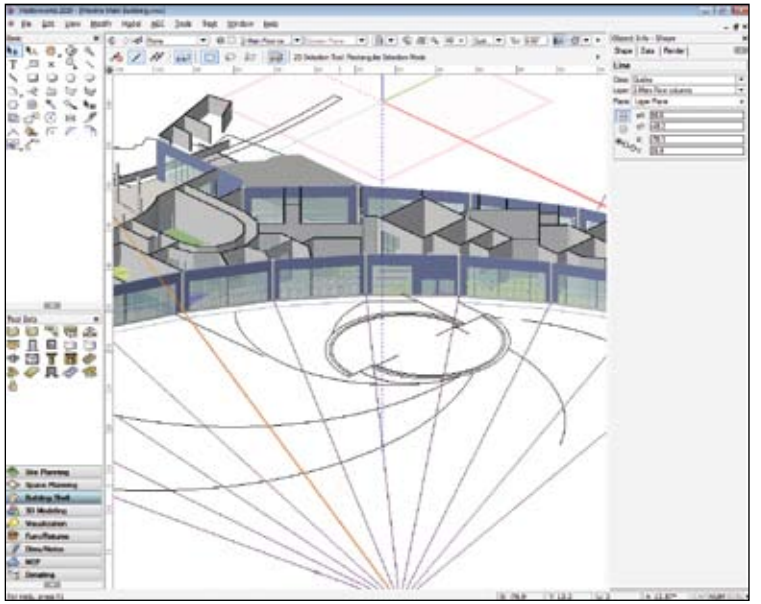
New Unified 2D/3D Environment

☐ A L S D M ☐

Building upon the Parasolid modeling foundation we laid in 2009, Vectorworks 2010 has a new unified view that makes it an ideal 3D modeling environment. When you're working in unified view, it allows you to select and modify objects on any layer.



New Unified 2D/3D Environment



New Planar Graphics

Improved 3D Snapping

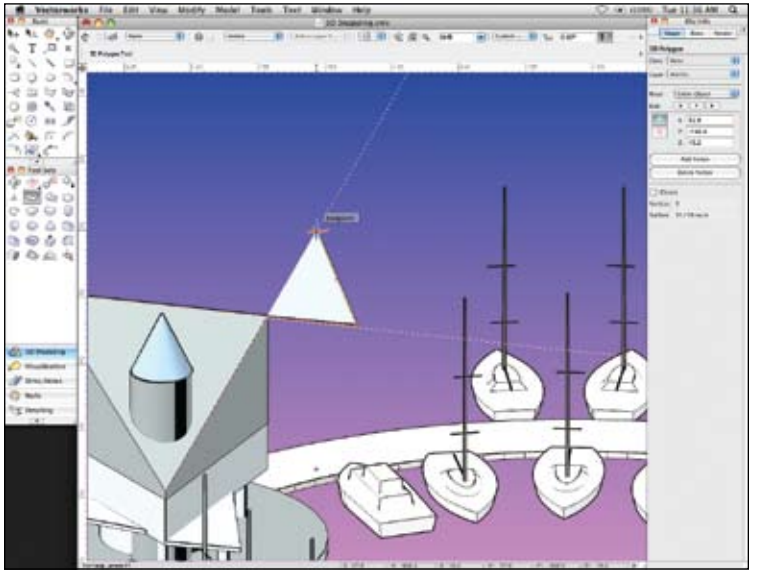
F A L S D M ☐

Now more than ever, Vectorworks users are investigating the potential of 3D. As a result, you'll notice improvements in the overall usability and reliability of 3D snapping. With the 3D cursor and new working plane graphics, you can reliably acquire your snaps, so it's easier to select, modify, and align your objects in 3D.

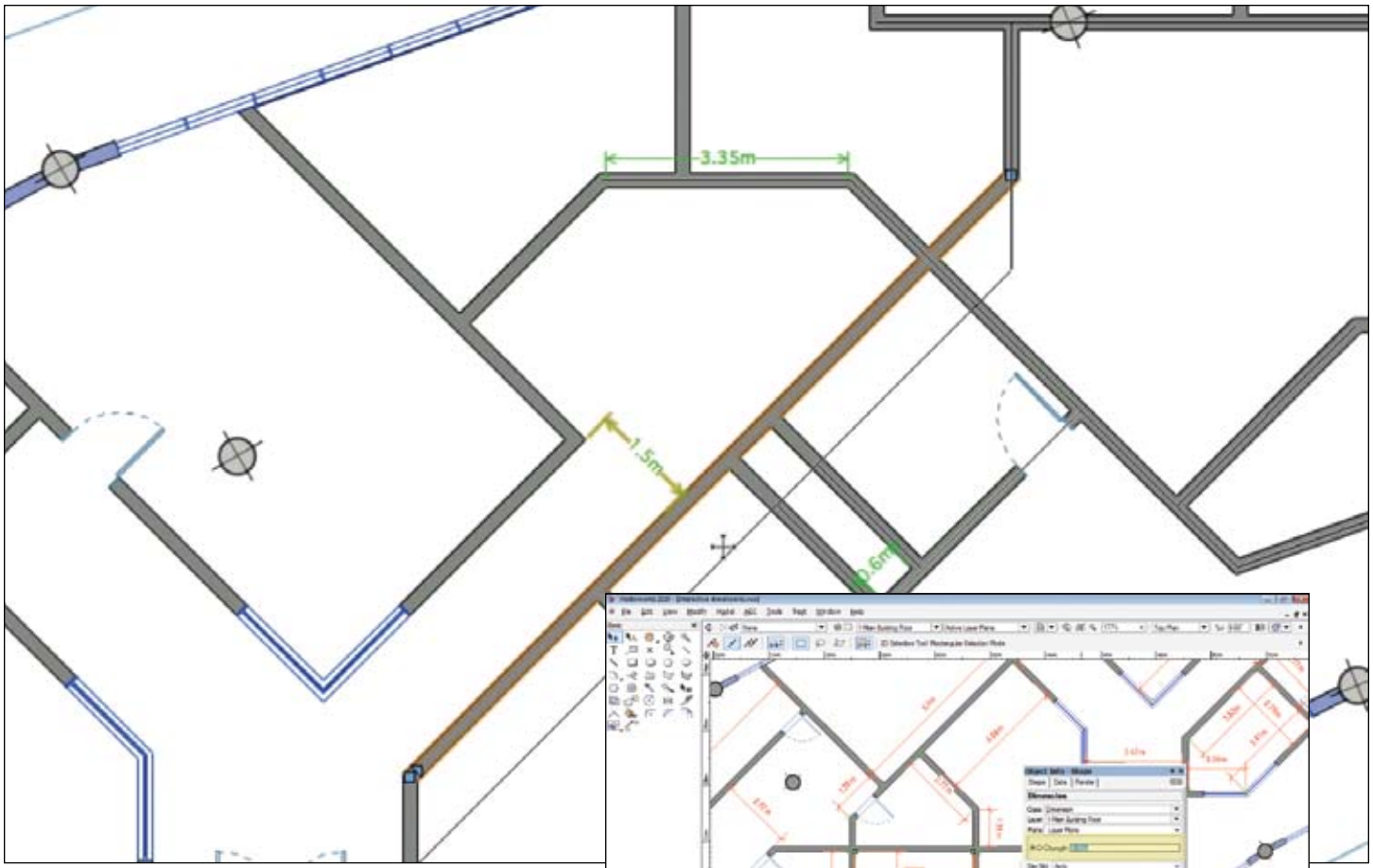
New Planar Graphics

F A L S D M ☐

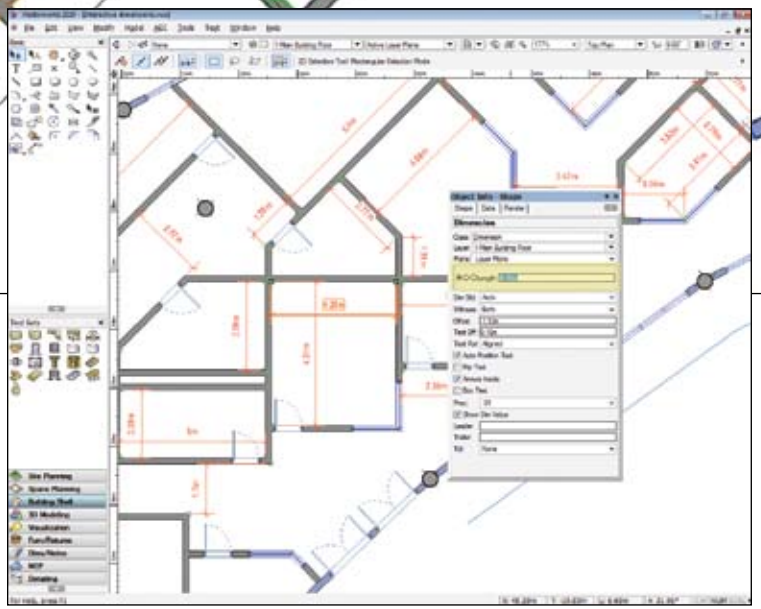
2D objects can occupy the screen plane as they do now, or they can become planar objects, which exist in 3D space and maintain their relationship to the 3D model.



Improved 3D Snapping



New Dimensional Constraint Manager



Interactive Dimension Editing

Improved Modeling

Associativity

New Dimensional Constraint Manager

F A L S D M

Make life easier with more reliable parametric constraints. The new and robust Dimensional Constraint Manager provides bi-directional associativity, so you can interactively make edits to either objects or their constraints and have the changes automatically reflected.

Interactive Dimension Editing

F A L S D M

Great new feature alert: now you can directly edit object geometry by changing its dimension value! Just edit the dimension value and when you press Enter, both the dimension and the associated object automatically update.

Usability

The easier it is to use the software, the easier it is for you to complete your work. So we've taken a lot of time to study usability issues and dramatically improve features to make them more intuitive. We're betting some of our favorites will be your favorites too. There's a viewport edit crop enhancement, improvements to the Purge command, attribute mapping of associative hatches, a brand new Select Similar tool, dash style improvements, in-place editing of referenced resources, and selection support for object modification tools.

New Help System

Adobe AIR for Online Help

F A L S D M R

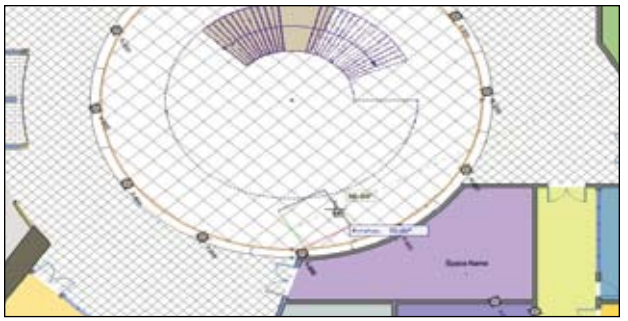
Our totally redesigned help system now uses Adobe AIR™; this eliminates browser issues and includes nifty Web 2.0 features. You'll enjoy superior search capability, adding web and RSS feed links, and including custom notes to the help topics that will benefit every Vectorworks user in your office.

Drawing Efficiency

New Select Similar Tool

☐ A L S D M ☐

Super time-saver alert! The new Select Similar tool enables you to select the objects you need with one click, regardless of class or layer. You can select all similar objects based on any combination of 27 criteria, define saved settings, and save, load, or delete your selection settings—easier done than said.



Easy Mapping of Associative Hatches

Easy Mapping of Associative Hatches

F A L S D M ☐

Now you'll have greater control over modifying an object's associative hatch fill—you can more easily identify the origin, and precisely set the hatch origin, rotation, and scale.

New Global World Coordinates

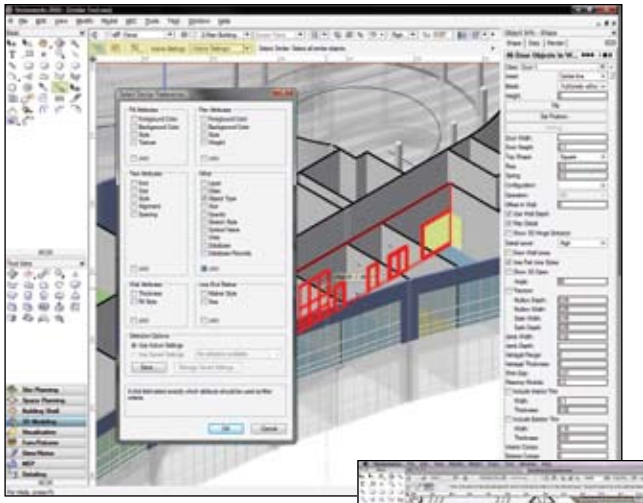
☐ A L S D M ☐

You can choose to display global world coordinates, in addition to screen coordinates, when in rotated plan view, making it simple to accurately align your designs with the global coordinate system. The global and screen coordinates also display in different colors throughout the application for quick identification.

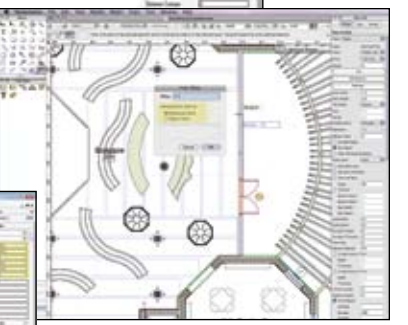
Improved Move by Points Tool

F A L S D M ☐

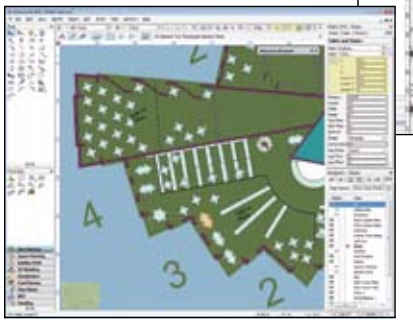
When moving objects by a specified offset distance from the reference point, you can now choose whether you'd prefer to click on the object you want to move first and then the reference point, or vice versa. It's up to you.



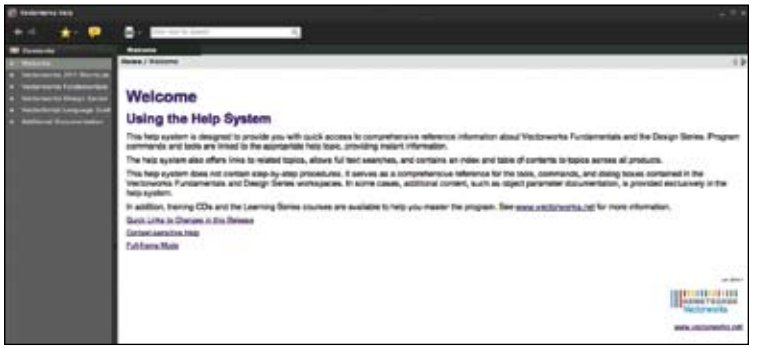
New Select Similar Tool



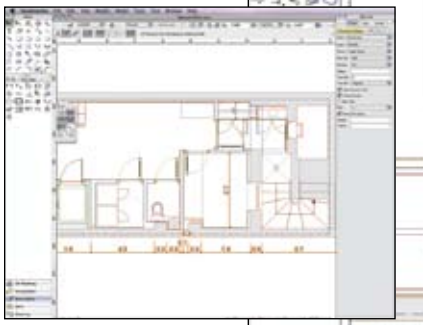
Improved Move by Points Tool



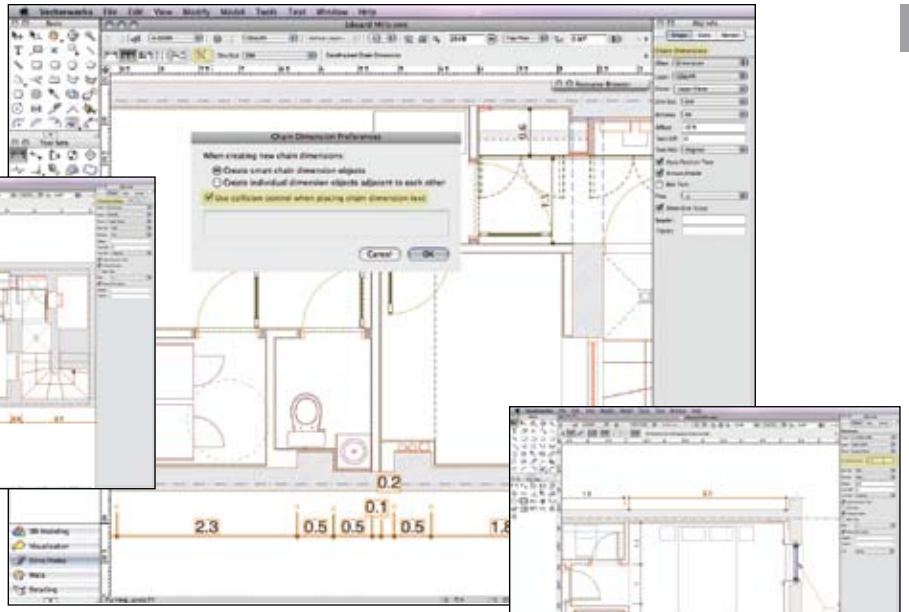
New Global World Coordinates



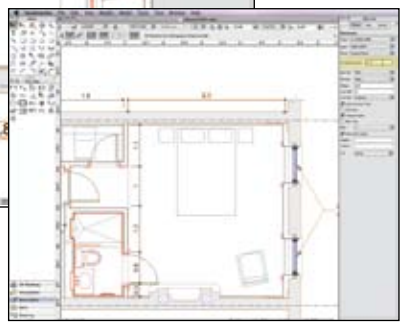
Adobe AIR for Online Help



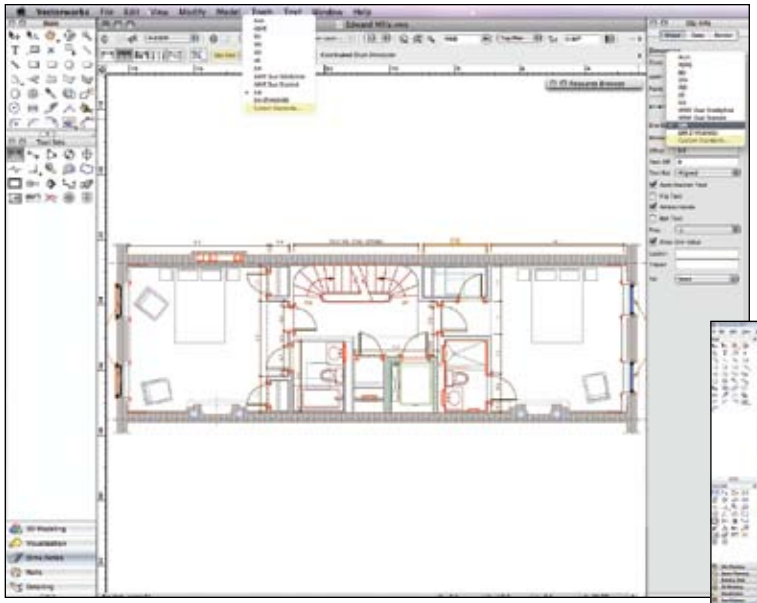
Simultaneous Dimension Editing



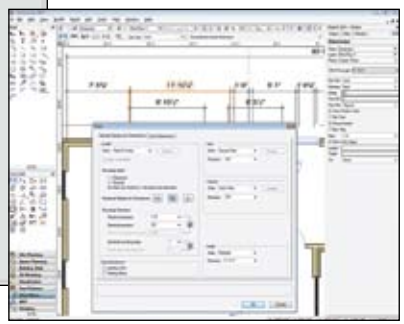
Chain Dimension Text Collision Control



New Segment Position Control for Linear Dimensions



New Dimension Standard Options



Fractional Dimension Display

Usability

New Dimension Options

Simultaneous Dimension Editing

F A L S D M

You can simultaneously edit single and chain dimensions; the Object Info palette now displays all of the additional parameters available for chain dimensions. You are a model of efficiency.

New Segment Position Control for Linear Dimensions

F A L S D M

We've added a widget to the Object Info palette and Properties dialog box for linear dimensions so you can specify which segment of the dimension (either endpoint or the center point) remains fixed when the dimension is resized.

New Dimension Standard Options

F A L S D M

You can now quickly select the default dimension standard for your document or specify a new custom dimension standard from a new drop-down menu on the Tool bar. You can also access the Custom Dimension dialog box from the Object Info palette.

Dimension Text Drag Support

F A L S D M

Previously, you could only drag dimension text parallel to the dimension line. Now, the text for angular dimensions can be moved along the dimension curve and text for all other dimensions can be dragged in any direction, without affecting the dimension line location. So go ahead and drag dimension text in linear, as well as chain dimensions, wherever you desire.

Chain Dimension Text Collision Control

F A L S D M

With text collision control, you can prevent chain dimension text from overlapping and becoming unreadable—ah, that's better.

New Arc Length Dimension Tool

F A L S D M

Now you can dimension any portion of an arc along its circumference.

Fractional Dimension Display

F A L S D M

Check out the new control in the Units dialog box. It gives you the option of displaying fractional dimension values in one of three smaller, classical fraction styles for all dimension types.

Usability

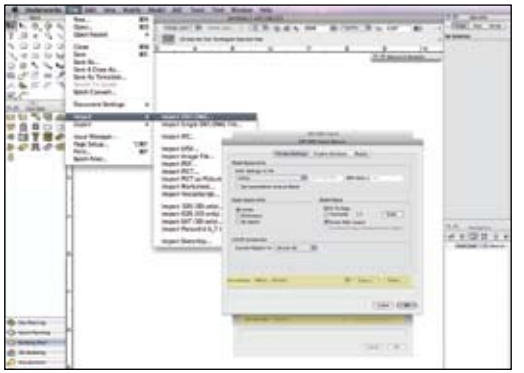
Import and Export Improvements

Vectorworks has always had a commitment to best-in-class interoperability, and with version 2010, your importing and exporting will be smooth sailing.

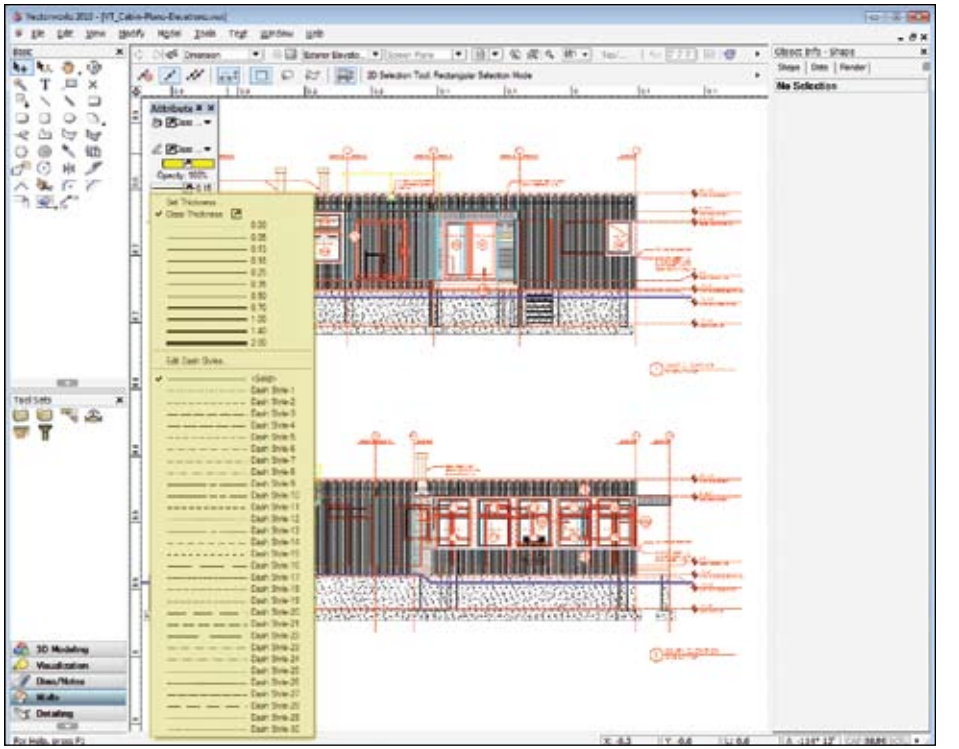
Import improvements include:

F A L S D M

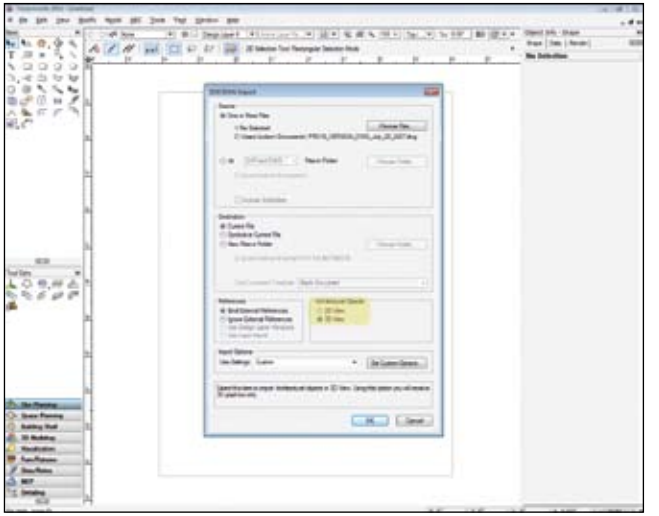
- Improved DXF/DWG reference import support: xRefs are now imported as referenced design layer viewports (Design Series products) or layer links (Fundamentals).
- DXF/DWG import saved settings: We've added a saved settings capability so you can recall saved sets of import options.
- Import support for AutoCAD® scaled blocks: AutoCAD scaled blocks are now imported as Vectorworks symbols rather than groups.
- Support for 128 dash styles: Vectorworks 2010 can hold up to 128 dash styles, so all dash styles will import, and your existing Vectorworks dash styles will not be overwritten.
- Import 2D or 3D view of ADT objects: When you import files containing ADT objects, you can select whether you want the 2D or 3D view of the imported architectural objects.
- AutoCAD table import support: Formatted tables are imported as lines and text and maintain their proper attributes—line style, color, line thickness, and size.
- New custom dimension standards: When DWG dimensions are imported, custom dimension standards corresponding to the AutoCAD file dimension styles are automatically created and applied.
- SketchUp® 7 import support: SketchUp 7 files can be imported in Vectorworks 2010 (Design Series products)



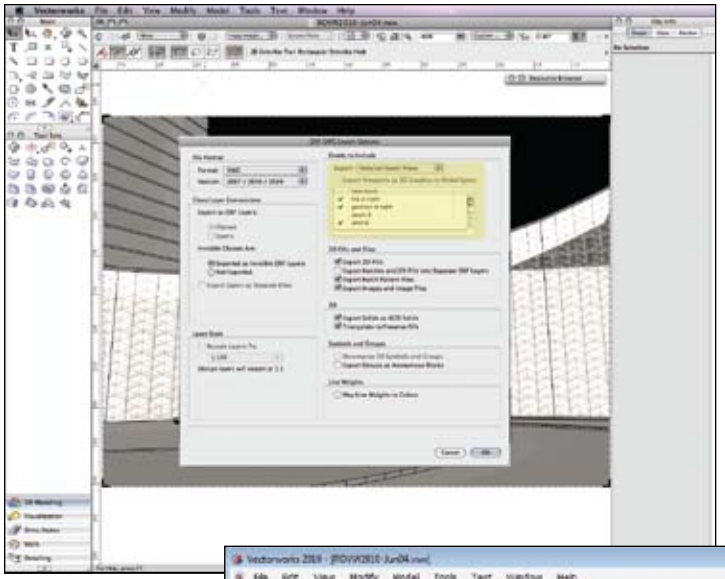
DXF/DWG Import Saved Settings



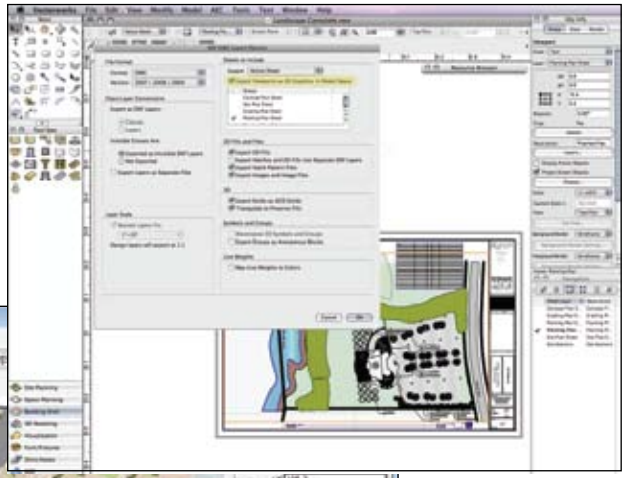
Support for 128 Dash Styles



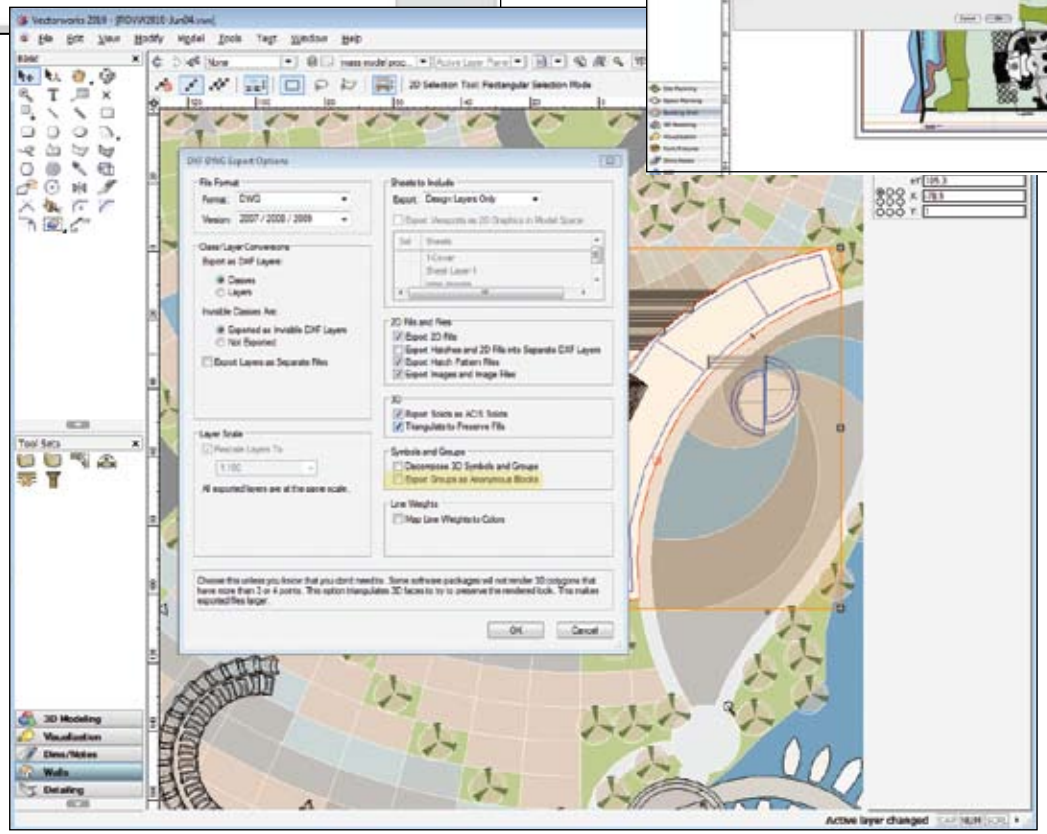
Import 2D or 3D View of ADT Objects



DXF/DWG Batch Export of Saved Views



DXF/DWG Export of Sheet Layers as 2D Graphics



DXF/DWG Anonymous Block Export Support

Usability

Export improvements include:

F A L S D M

- DXF/DWG batch export of saved views: Easily batch export any number of, or all saved views to separate DXF or DWG files.
- DXF/DWG anonymous block export support: Groups can now be exported as either anonymous blocks or named blocks.
- DXF/DWG export of sheet layers as 2D graphics: When sheet layers are exported, a new option allows viewports, and saved views with 2D and 3D Vectorworks graphics, to be exported as 2D "flat" graphics in AutoCAD model space.
- Improved IFC Export: The architectural symbol content in Vectorworks Architect has been pre-categorized with IFC data, making your IFC exports easy (Architect, Designer).

Usability

Enhanced Viewport and Referencing Capabilities

New Viewport Visibility Options

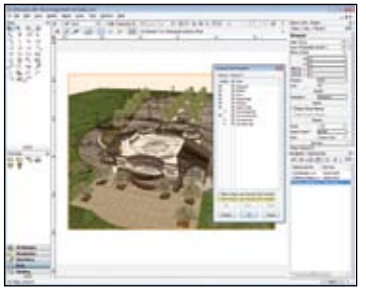
☐ A L S D M ☐

Now you'll enjoy even greater control over the look and feel of the viewports in your design. This preference allows you to apply your non-referenced design layer viewport visibilities to your sheet layer viewports.

Improved File Referencing Capabilities

F A L S D M ☐

A more intuitive solution: when the program can't find referenced resources during an update, it will prompt you to break the reference, replace the resource with another available one, or delete the resource entirely.



New Viewport Visibility Options

In-Place Reference Editing

F A L S D M ☐

Here's a big time-saver: now you can modify referenced resources in place and in context with the right-click edit option, and even save the changes directly to the referenced file. Use this option for referenced gradients, hatch definitions, record definitions, render backgrounds, symbol definitions, textures, and, for Design Series users, sketch styles and wall styles. This feature will also allow you to modify referenced symbols in context.

Improved Viewport Crop Editing

F A L S D M ☐

When creating or editing viewport crops, the cropped area that was previously invisible is now visible in either wireframe or light grey. This allows you to snap to objects outside the crop while reshaping or moving the crop object.

Improved Elevation Benchmark

☐ A L S D M ☐

We've added another parameter to the US-style elevation benchmark so you can extend the crosshair marks a custom distance beyond the marker circle.

New Find Resource Capability

F A L S D M ☐

Try the handy new Find Resource menu item in the Resource Browser to quickly locate resources within the current document.

Resource Browser View Enhancement

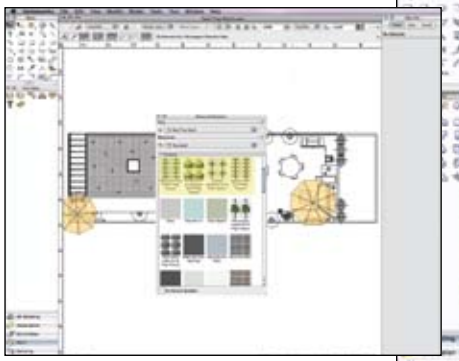
F A L S D M ☐

It's a cinch to distinguish between similar resource names, since the Resource Browser now supports up to five lines of text for thumbnail views.

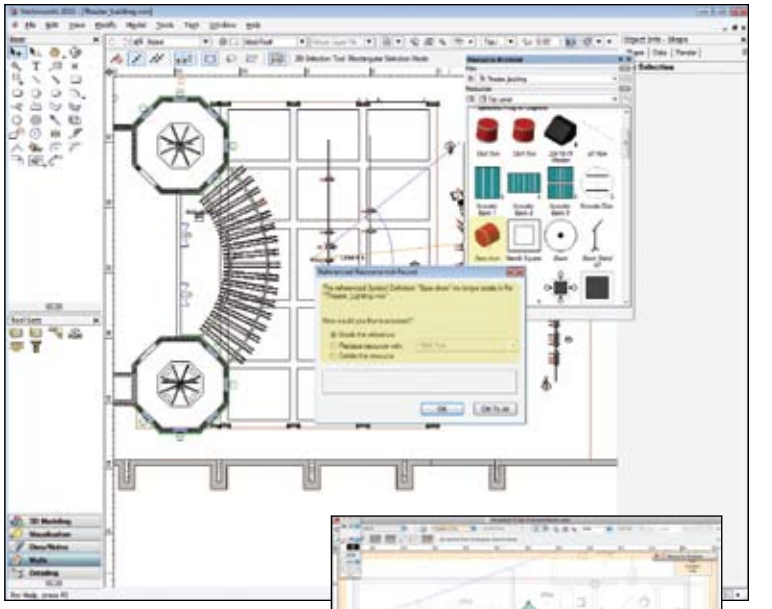
Multi-Processor Support

F A L S D M R

All of the Parasolid-based functionality in Vectorworks 2010 now takes advantage of multiprocessing on the Macintosh.

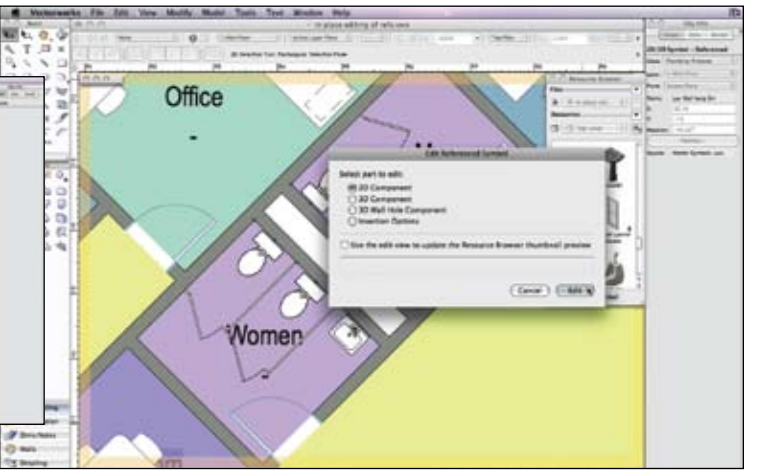


Resource Browser View Enhancement



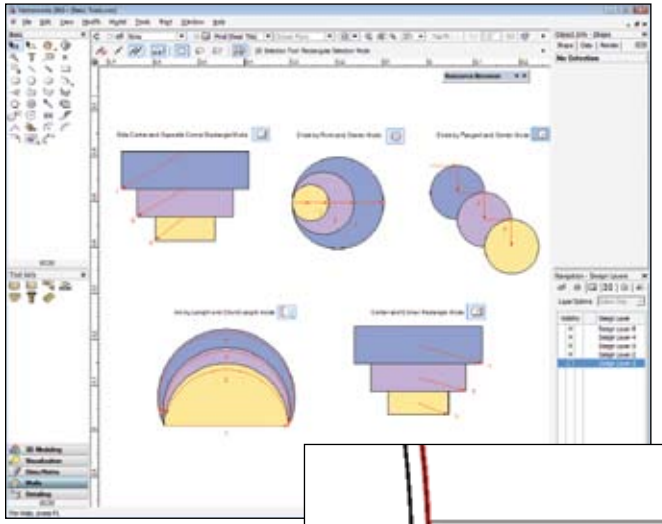
Improved File Referencing Capabilities

Improved Viewport Crop Editing

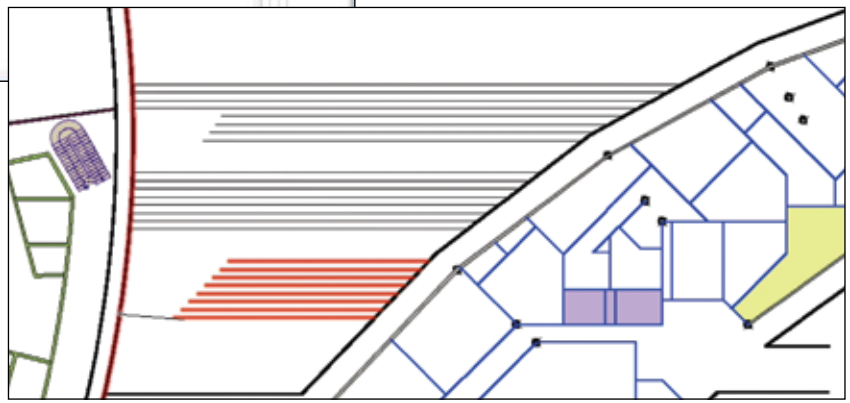


In-Place Reference Editing

Improved 2D Reshape Tool



New Rectangle Modes
New Circle Modes
New Arc Mode



Connect/Combine Tool Support for Multiple Objects

Usability

Drafting Improvements

New Dash Style Capabilities

F A L S D M

With easy access to the Dash Styles dialog box from the Attributes palette, you can use up to 128 dash styles, reorder your dash styles, and custom name dash styles.

New Purge Capabilities

F A L S D M

We've upgraded the Purge command in Vectorworks 2010 to do the following:

- Purge specific empty symbol folders
- Purge objects outside of the page boundary
- Purge plug-in object symbols and group symbols
- Purge record formats that store plug-in object defaults
- Purge unused dash styles
- Undo and redo purges
- Select and confirm the items to the purged

Improved 2D Reshape Tool

F A L S D M

Here's a new trick: when you use the 2D Reshape tool to make a marquee selection and hold the Shift key down, you can select object vertices even when they are over another object.

New Rectangle Modes

F A L S D M

Drawing precise rectangles just got easier with new rectangle by Center/Corner and Side/Opposite Corner modes.

New Circle Modes

F A L S D M

Drawing circles just got easier too. With new Circle by Point and Center and Circle by Tangent and Center modes, you'll create the most precise circles.

New Arc Mode

F A L S D M

Check out the new Arc by Circumference mode of the Arc tool.

Connect/Combine Tool Support for Multiple Objects

F A L S D M

We introduced a new mode that lets you extend multiple objects to a single boundary object in just one click. Voilà!

Chamfer by Length Option

F A L S D M

Now you can precisely define the length of the chamfer line.

Shortcut Support for Modification Tools

F A L S D M

Now the Rotate, Mirror, Offset, and Move by Points tools don't require you to pre-select the object you wish to modify.

Vectorworks Architect

Vectorworks has always been known for providing a flexible and easy-to-use 3D modeling application that is ideal for Building Information Model (BIM) workflows. Vectorworks Architect version 2010 brings you the features you've been waiting for, like corner windows and a new versatile stair. This year the software is more robust with the implementation of the 2D Dimensional Constraint Manager from Siemens PLM. It's a technology library that ensures a solid, reliable foundation for associating objects; for instance, wall networks make dragging and joining walls a breeze. Additionally, we've made behind-the-scenes changes to bring you simpler interfaces and more efficient tools. And you'll enjoy better coordination of drawing information. And that's just the beginning:

New Functionality

Improved Wall Networks

☐ A ☐ ☐ D ☐ ☐

The Dimensional Constraint Manager allows associated relationships and constraints between walls. This means more robust and reliable wall networks and connections that work exactly the way you want.

Wall Sculpting

☐ A L S D M ☐

Our new wall sculpting capabilities allow you to add wall features like projections and recesses to walls while maintaining the wall intelligence and behavior. Now you can model those older or unusual walls!

Improved Drawing Coordination

☐ A L S D M ☐

Vectorworks Design Series users will enjoy the automatic coordination of sheet numbers and drawing numbers among sheet borders, drawing labels, and section markers.

New Corner Window

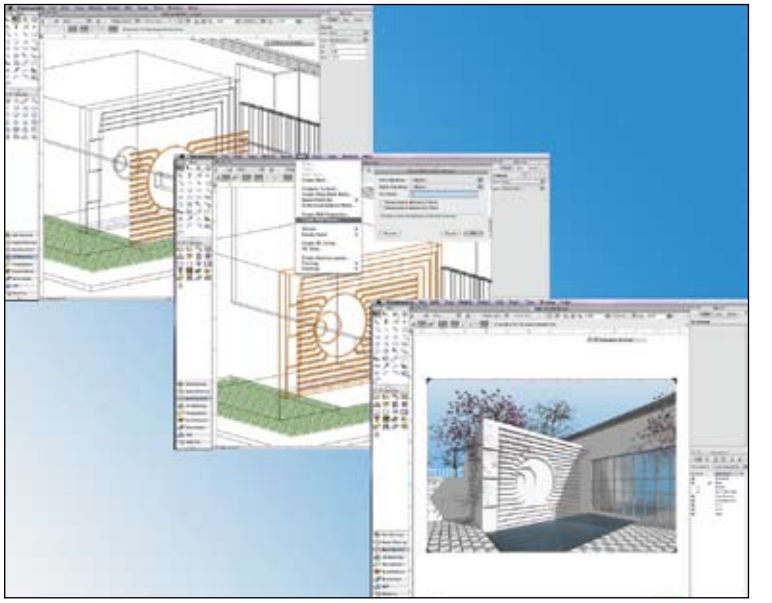
☐ A L ☐ D ☐ ☐

You can easily place corner windows in 2D or 3D.

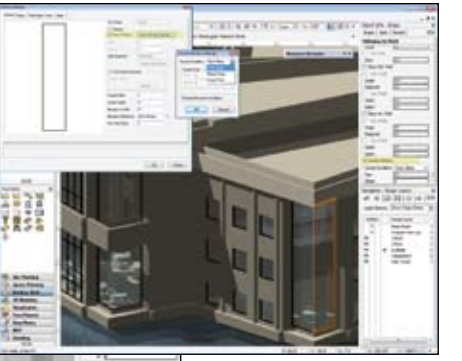
New Stair Tool

☐ A ☐ ☐ D ☐ ☐

Introducing a fantastic new stair object with improved performance and reliability in both 2D and 3D views! The new stair options let you tailor the settings to your specific needs, and then transfer the parameters from one stair to another with a single click.

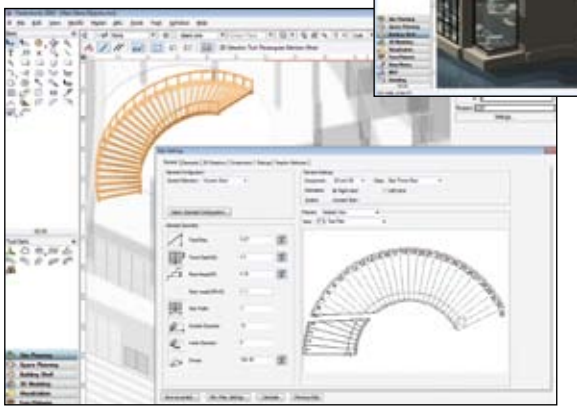


Wall Sculpting

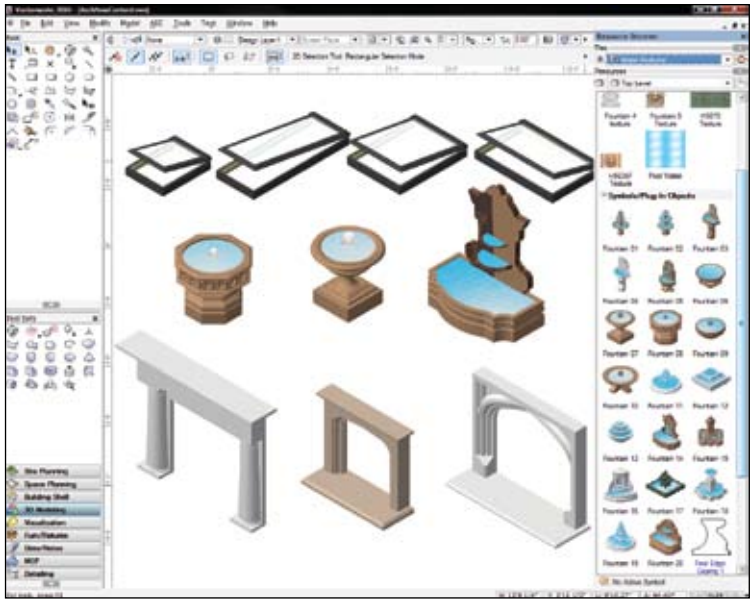


New Corner Window

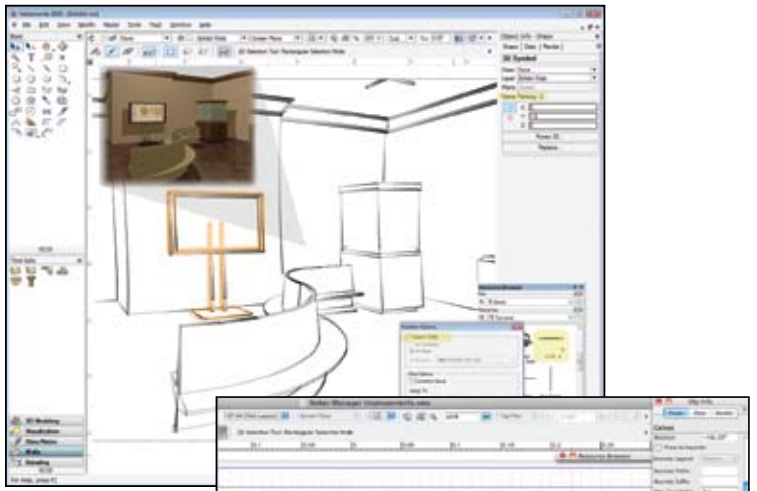
Improved Drawing Coordination



New Stair Tool



New Content



Prevent Wall Insertion Option

New Notes Manager Capabilities

Vectorworks Architect

Quality Improvements

Enhanced Wall Joining

F A L S D M

Complex wall joins are now made routine. Specify the "core" wall component, and watch as the wall components match correctly to their counterparts in the joining wall. And wall caps now can display using component line attributes.

New Notes Manager Capabilities

A L S D M

We've made drawing notation callouts and keynotes easier. You'll see:

- New bubble and leader styles for the Callout tool, giving you more control, while adhering to office graphic standards
- Keynote display counters can be numeric or alphabetical and are reflected in the keynote legend
- Ability to link a keynote to any legend in the file
- Easy updating of keynote legends
- Multiple columns for keynote legend text
- Ability to display and sort the keynotes notes by key tag
- Automated sorting of keynotes in the Notes Manager

Improved Wall Hole Editing

F A L S D M

The wall hole component we introduced to symbols in version 2009 was a great success. With version 2010, we've made editing even easier. When editing the 3D wall hole component, the symbol instance being edited is shown in black, with the surrounding context shown in gray. Component geometry is drawn in red. Now it's easy to create the editing geometry!

Prevent Wall Insertion Option

F A L S D M

Now you can specify the wall insertion mode for symbols or plug-in objects at creation, for greater control over the behavior of your resources.

Improved Wall Hole Textures

R

We're giving you more control over wall opening textures. Now you can assign textures to the faces of the wall opening.

Simple Stair

F A L S D M

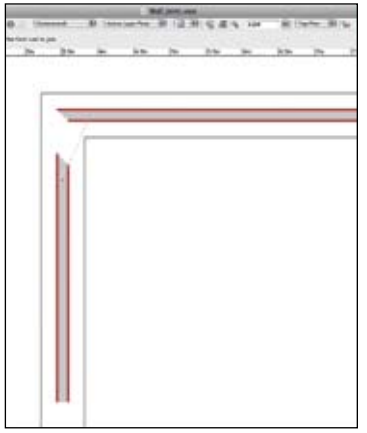
Design Series users who don't need a complex stair now have access to the simple stair object in their workspaces.

New Content

A D

Vectorworks Architect 2010 ships with a vast array of new symbols, new manufacturer object libraries, improvements to object geometry, and standard naming conventions.

- New skylights from Velux
- New audio/video and home electronics library
- New fireplace fronts, mantels, and surrounds
- Updated Weather Shield door and window library
- New water features



Enhanced Wall Joining

Vectorworks Landmark

Welcome to Landmark 2010. We've got some great new improvements to show you, like new parking tools, better hardscapes, improvements to the site modeling capabilities, and a host of usability changes, all designed to make you more efficient. Go ahead and dig in.

New and Improved Parking Tools

☐☐ L ☐ D ☐☐

Try the new parking tools that make it easy to create intelligent and reportable parking spaces. The Parking Along Path tool creates parking spaces along curved paths. The Parking Area tool fills an area with parking spaces and adjusts the spaces for tree islands and handicap spaces.

New Hardscape Capabilities

☐☐ L ☐ D ☐☐

Now it's even easier to create custom patios, walkways, driveways, and other landscape elements with the improved Hardscape tool. We've made improvements in the tag, in turning off border segments, in 3D texturing of hardscape borders, in placing openings with borders, and in the way that hardscapes modify the site model.

Improved Landscape Area Object

☐☐ L ☐ D ☐☐

Two for the price of one. Now you can create a concave cloud edged landscape area, and get an improved 3D visualization of the land area you've created.

Improved Digital Terrain Model (DTM)

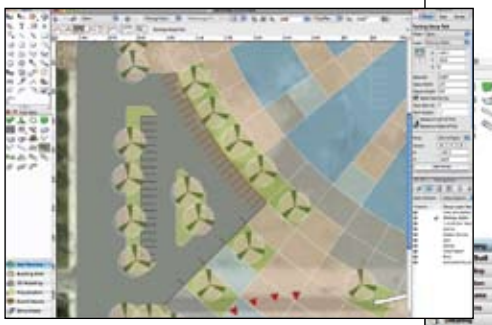
☐ A L ☐ D ☐☐

We went under the hood and gave the DTM an upgrade that will give you a more reliable experience. Additionally, you'll find it significantly easier to crop the site model with a convenient command.

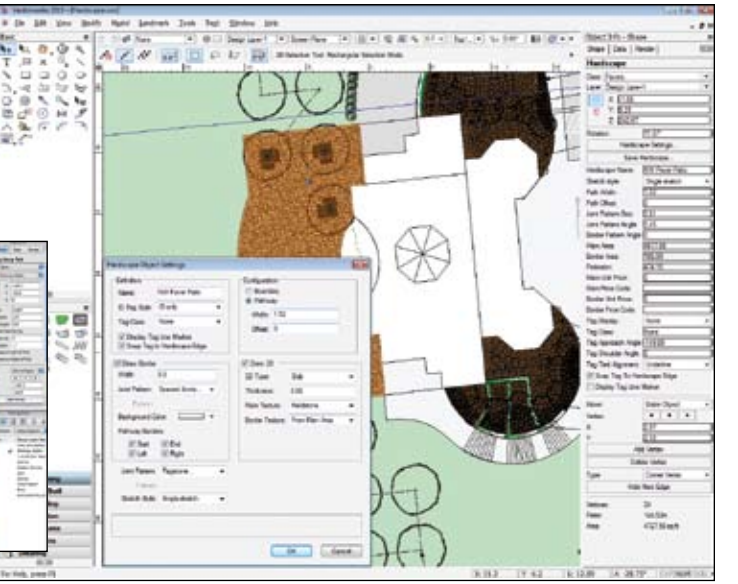
New Plant Definition Options

☐☐ L ☐ D ☐☐

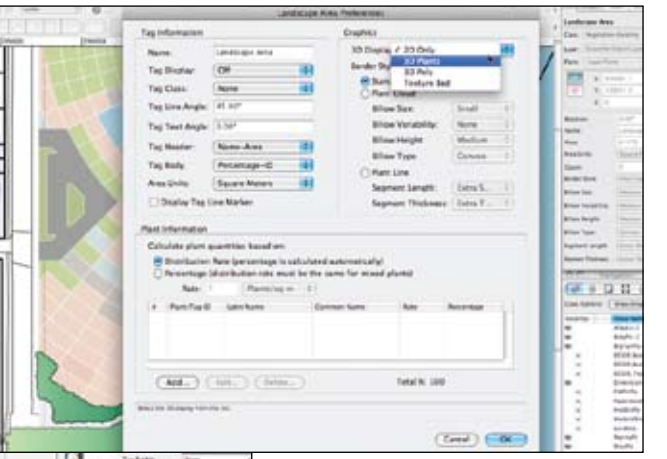
Now, the plant data spread and height fields display on the Definition tab, so you can change the default plant data at the start of your plant creation process.



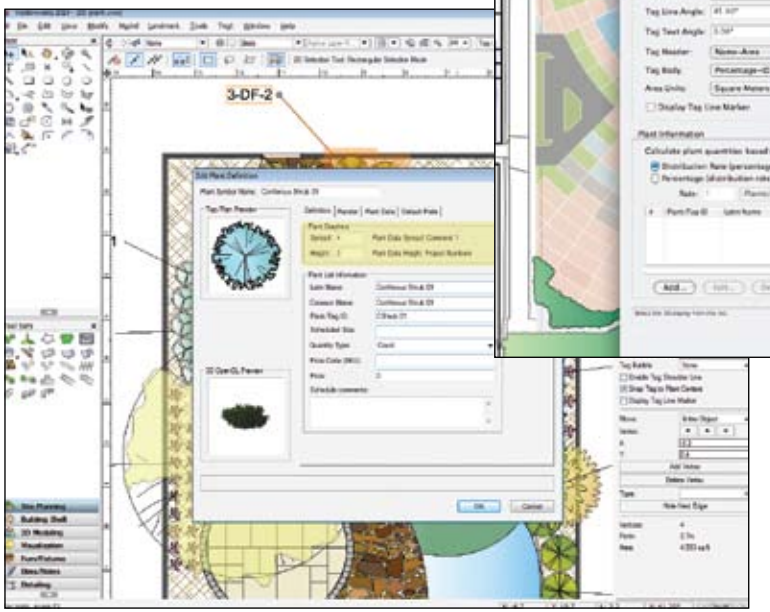
New and Improved Parking Tools



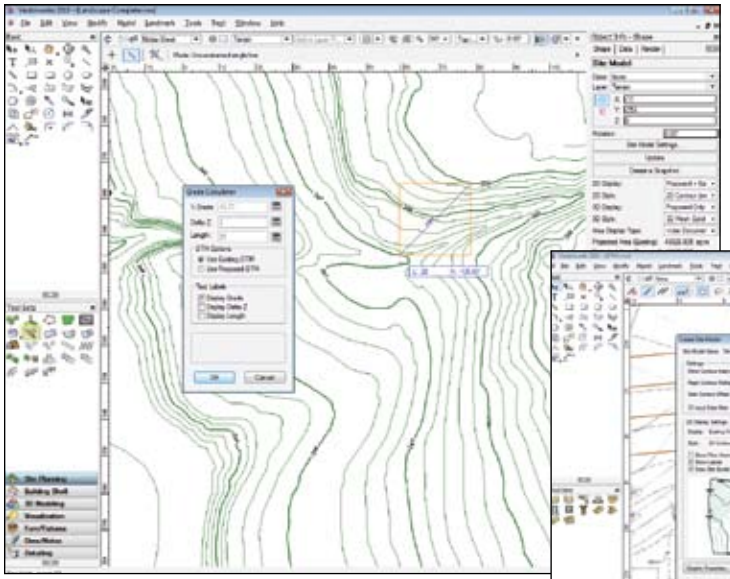
New Hardscape Capabilities



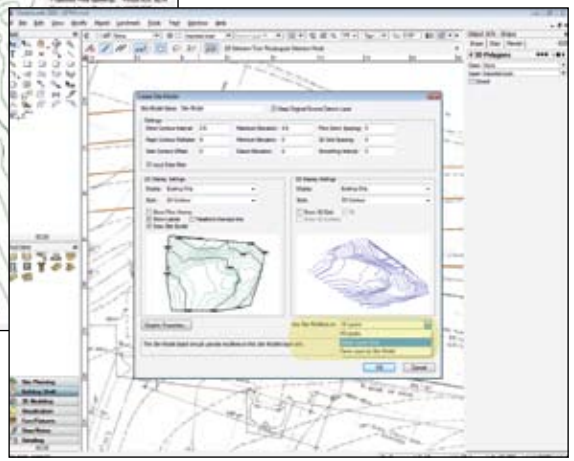
Improved Landscape Area Object



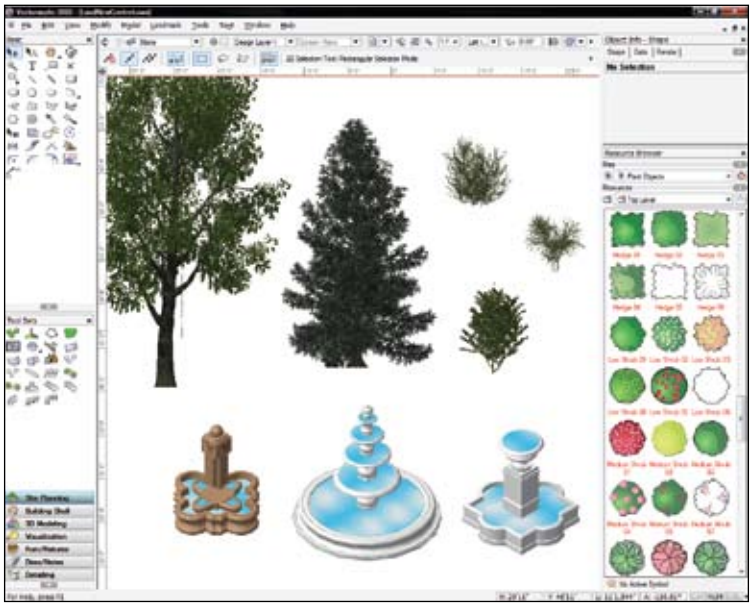
New Plant Definition Options



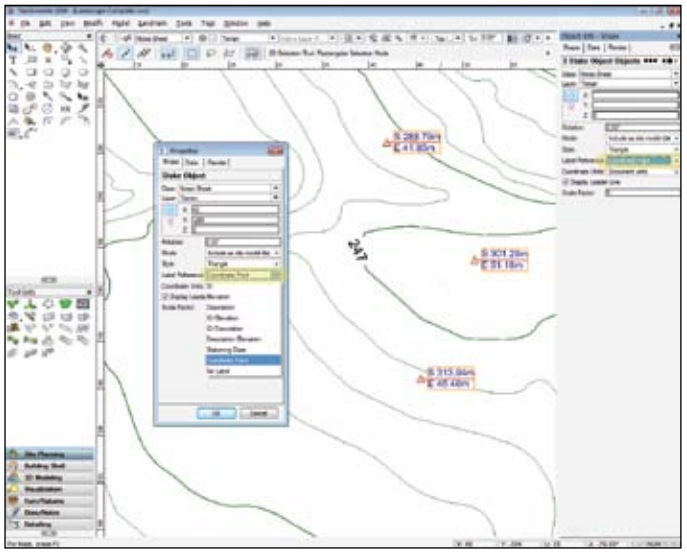
New Grade Calculator



Use Site Modifiers on Visible Layers Only



New Content



New Stake Object Coordinates

Vectorworks Landmark

New Grade Calculator

☐☐L☐D☐☐

Use the new Grade Calculator tool to calculate and display slope parameters in areas of changing elevation, including site models.

Use Site Modifiers on Visible Layers Only

☐A L☐D☐☐

In Vectorworks Architect and Landmark 2010, you can choose which modifiers will affect the site model by selecting only visible layers to modify it. Hooray for greater flexibility and control!

New Stake Object Coordinates

☐☐L☐D☐☐

We've added a new coordinate point label to the stake object. Coordinates update when you change the origin or move the object.

New Landmark Schedule Command

☐☐L☐D☐☐

A new command makes it easier to add Landmark schedules to your drawing.

New Content

☐☐L☐D☐☐

- Over 800 plant images from Monrovia®
- Improved default plants include 3D representation
- New rock objects
- New water features
- New hardscape paver resources in 2D and 3D
- Improved sitework trees

Vectorworks Spotlight

Vectorworks Spotlight 2010 continues to be the gold standard in entertainment design. We've added new functionality for event planning, new video screen objects, and usability changes that make your work feel easy. Shine on.

New Event-Planning Suite

☐☐☐ S D ☐☐

Introducing a new event-planning suite! This complete set of automated tools and menu commands makes it a breeze to create rooms for events ranging from banquets and corporate presentations to large-scale shows and exhibits—and everything in between. Now you can easily create the room, stage, steps, lectern, video screens, and seating. Plus, you can create standard views to show your client, and generate reports for the total number of tables and chairs in the room. We've made event planning a lot less painful.

New Video Screen Objects

☐☐☐ S D ☐☐

Use these first-class tools to add and visualize television screens, video projectors, video screens, and edge-blended projection screens. Each produces intelligent objects that can display images in rendered views (Renderworks required), indicate the optimum viewing area, and display custom values and stand configurations. Adding video screen and projector elements to your design just got a whole lot easier.

New Seating Layout Capabilities

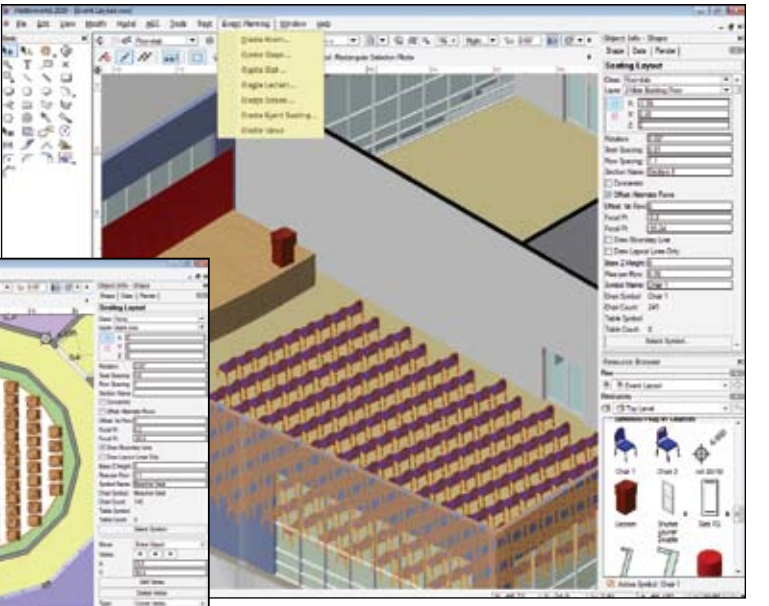
☐☐☐ S D ☐☐

Now you can offset alternate rows of seating and calculate row and seat spacing based on the chosen symbol. Plus, when you're creating worksheets of seating layouts with tables, the command will show and count nested symbols like tables and chairs separately.

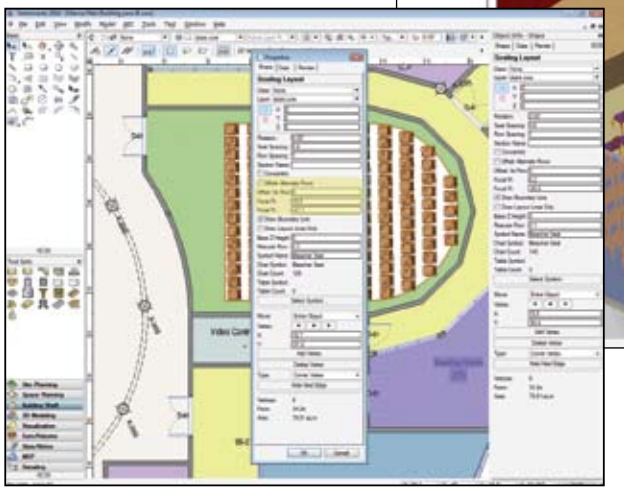
Double-Click Insertion

☐☐☐ S D ☐☐

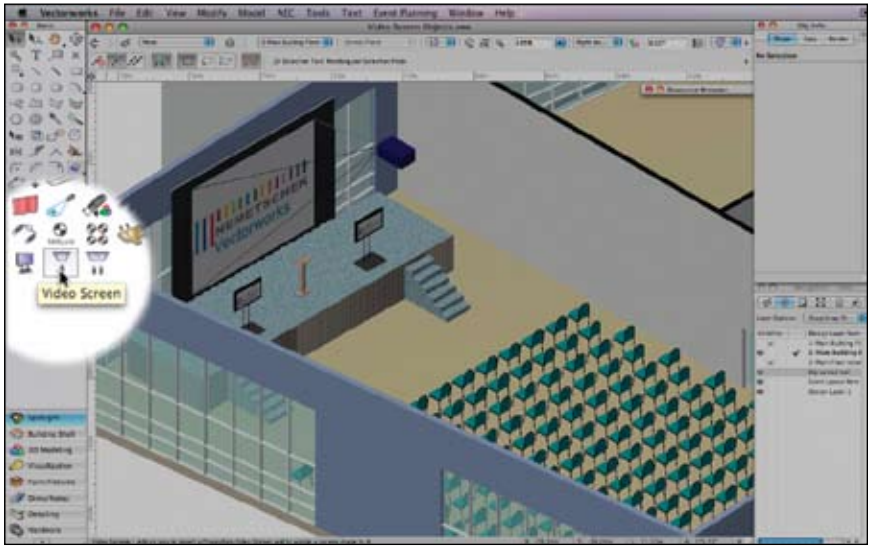
With a double click on your symbol resource, you can insert lighting instruments and accessories. Click—Click!



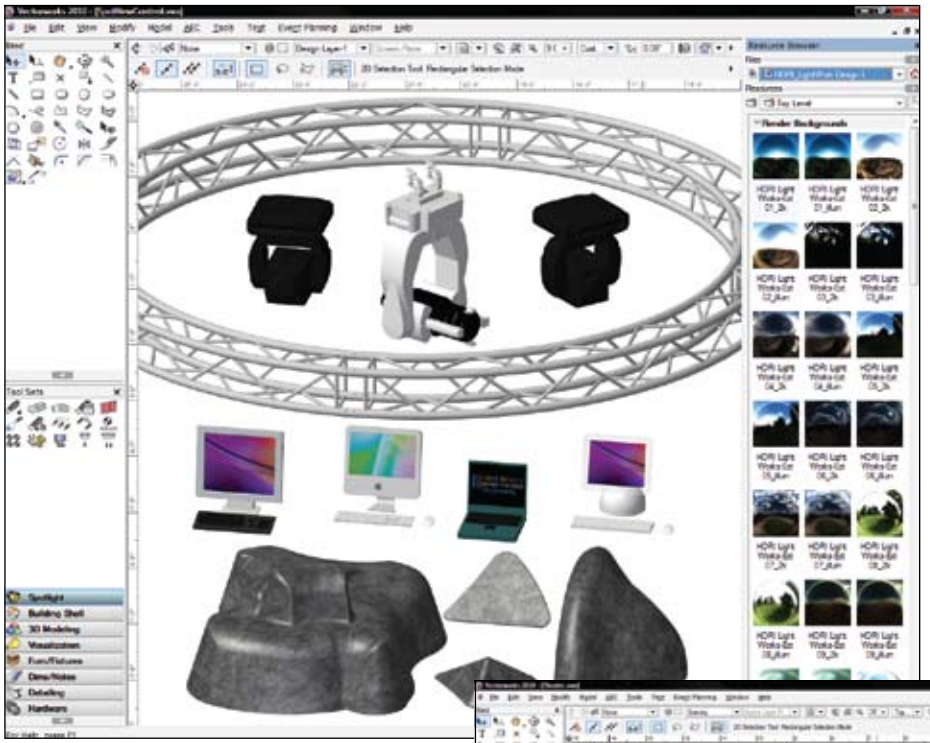
New Event-Planning Suite



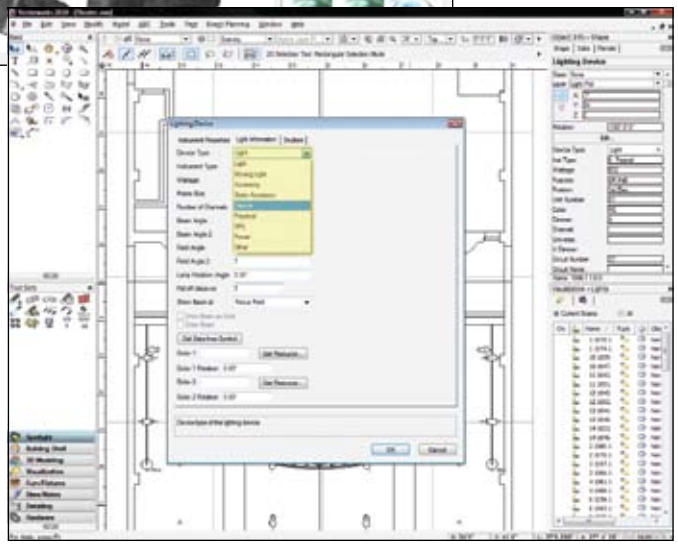
New Seating Layout Capabilities



New Video Screen Objects



New Content



New Lighting Device Types

Vectorworks Spotlight

Improved Lighting Device Color Support

☐☐☐ S D ☐☐

Now you can enjoy greater flexibility when specifying color for your lighting devices. Use RGB or hex values, or manufacturer names or abbreviations.

New Lighting Device Types

☐☐☐ S D ☐☐

We've added Device, Practical, SFX, Power, and Other to the list of the lighting device types.

Create Universal Spotlight Object Libraries

☐☐☐ S D ☐☐

We've consolidated the object libraries for Vectorworks Spotlight into single files with both metric and imperial records for the instrument symbol's frame size and weight. Whether your file uses imperial or metric units, the correct values are automatically provided.

New Content

☐☐☐ S D ☐☐

Updated Libraries with New Symbols:
Altman
Clay Paky
ETC
High End
Strong/Xenotec
Vari-Lite

New Lighting and Truss Catalogs from:
ADB Lighting
DTS Lighting
JB Lighting
Eurotruss

New and Improved Gobo Catalogs from:
Apollo
GAM
Rosco
GOBOLAND (New)
GoboMan (New)

New Fireplace Fronts, Mantels, and Surrounds

New Water Features

Vectorworks Machine Design

Vectorworks Machine Design 2010 will ratchet up the productivity of product designers, fabricators, and machine part manufacturers everywhere with new features that make it even easier to use.

New Sheet Metal Screws

☐ A L S D M ☐

We've added 2D and 3D sheet metal screws for self-tapping screw objects.

New Lag Screws

☐ A L S D M ☐

We've also added 2D and 3D lag screw objects.

New Carriage Bolt Objects

☐ A L S D M ☐

And we wouldn't be complete without adding 2D and 3D carriage bolts, or round head, round head square neck bolts.

New Simple Beam Properties

☐ A L S D M ☐

You can now access the properties of standard structural shapes when performing a simple beam analysis, including the new 2D and 3D Z-section object (Design Series required).

Improved Simple Beam Calculator

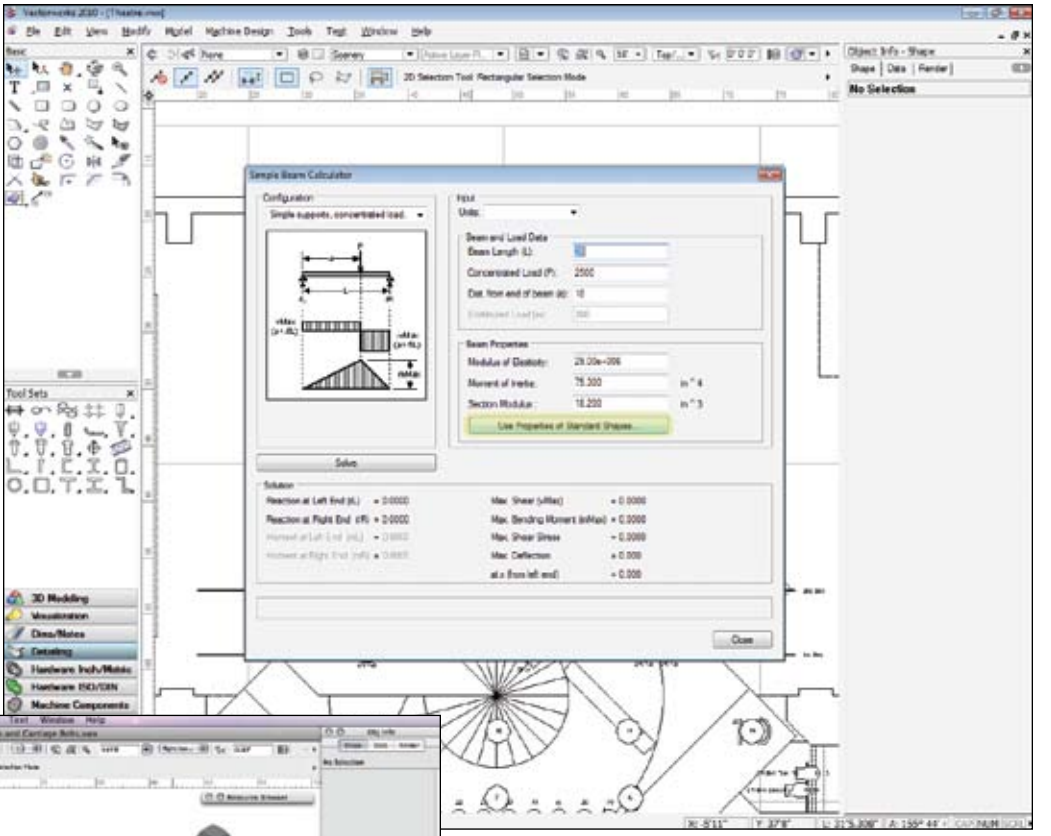
☐ A L S D M ☐

We've replaced the abbreviated field titles of the Simple Beam Calculator with more descriptive terms. And you'll see an option that lets you populate the beam properties fields with standard structural shape information.

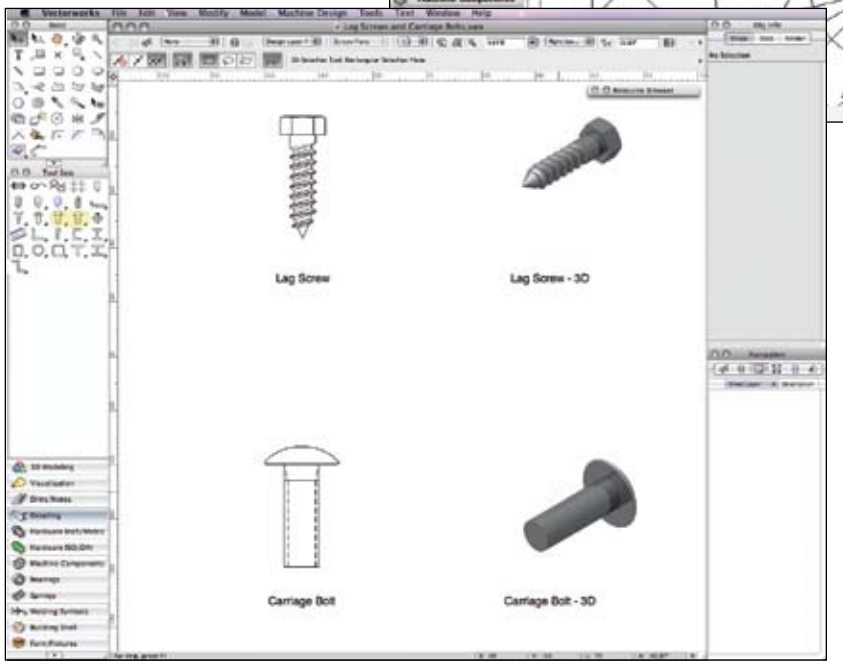
Improved Shaft Tool

☐☐☐☐ D M ☐

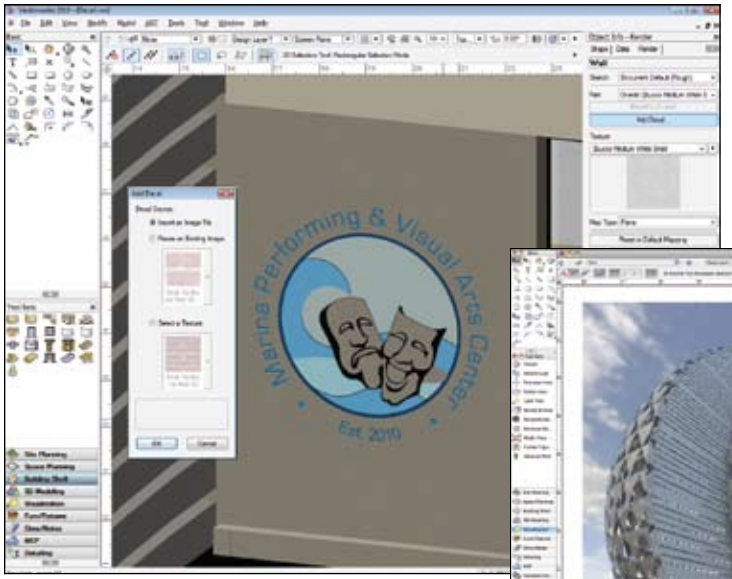
We've added pipe threads to the Shaft tool.



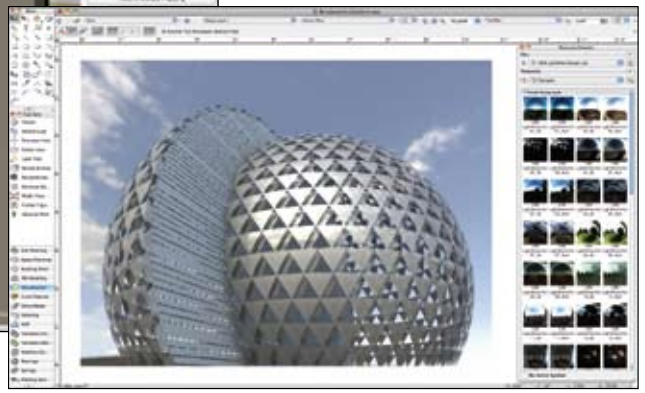
New Simple Beam Properties



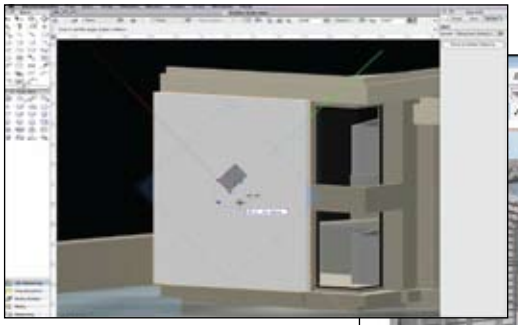
New Lag Screws and New Carriage Bolt Objects



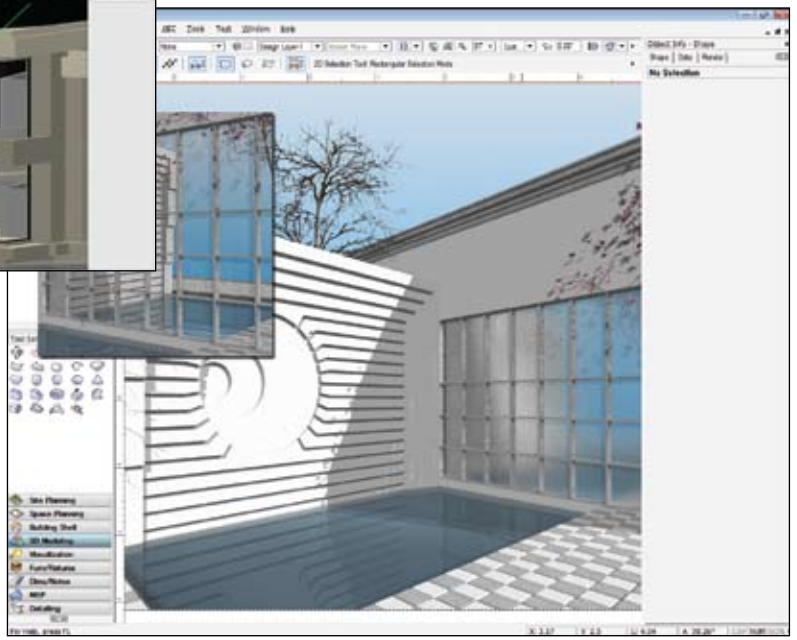
New Decal Texturing



New Content



Improved Texture Mapping Controls



New Blur Reflectivity Shaders

Renderworks

Presenting Renderworks™ 2010—the program that makes drawings look so real they leap off the screen. Check out these changes and you'll see why:

New Decal Texturing

☐☐☐☐☐☐R

Since you can now apply multiple decal textures over another texture, it's simple to create labeling, signage, and layered material effects.

New Blur Reflectivity Shaders

☐☐☐☐☐☐R

You can now add a blur factor to the simple glass and mirror reflectivity shaders. With these shaders, reflections will look so realistic, you might have to touch them to see if they are real.

Improved Texture Mapping Controls

☐☐☐☐☐☐R

You'll enjoy the improved 2D and 3D texture mapping. We've merged intuitive mapping controls into a single tool. Nice and simple.

New Content

☐☐☐☐☐☐R

New HDRI Backgrounds including exterior, interior, and studio backgrounds have been added.

New VBvisual Plant Tool

☐☐☐☐☐☐R

Now you can easily place top quality 3D plants that render quickly and look great. Just choose the plant type from the list and select the planting season. Click and plant!

Start Us Up

With Vectorworks 2010, you'll experience the flexible, versatile, and intuitive software that has always characterized Vectorworks. With an easy-to-use 3D environment, fantastic new features, and improved usability, upgrading your copy of Vectorworks is just the change you need. You'll be amazed at what a difference a year makes!

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System Recommendations
Mac OS X 10.5.7 or later
QuickTime
Intel Core 2GHz or better
DVD-ROM drive (dual layer)
Screen resolution 1024 x 768 (XGA)
Display color depth 15 bit or higher

Windows XP SP 3
Windows Vista SP 2
QuickTime 7.5 to 7.6 (higher versions not recommended)
DVD-ROM drive (dual layer)
Screen resolution 1024 x 768 (XGA)
Display color depth 15 bit or higher

Vectorworks
RAM 1GB minimum, 2GB recommended
Hard drive space 10GB free

Vectorworks plus Renderworks
RAM 2GB minimum, 4GB recommended
Hard drive space 10GB free

Vectorworks Designer
RAM 1GB minimum, 2GB recommended
Hard drive space 10GB free

Vectorworks Designer plus Renderworks
RAM 2GB minimum, 4GB recommended
Hard drive space 10GB free

See www.vectorworks.net/system-recommendations.php
for updated information.