



Autodesk® Revit® MEP 2011

What's New

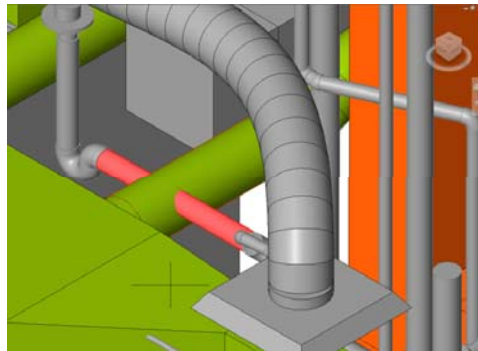
Top Features

Autodesk® Revit® MEP 2011 Software

Enhanced Design Functionality

Improved Workflow

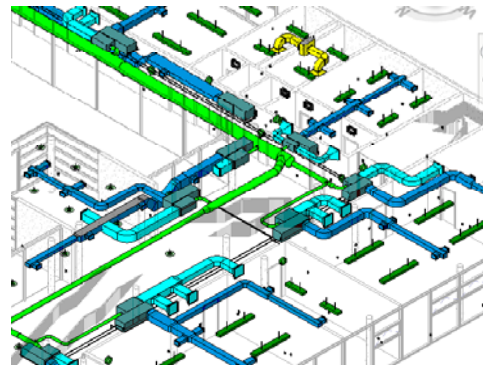
- **S** Model review*
- **S** Autodesk® Revit® DB Link*
- **S** Access to Autodesk® Green Building Studio® web-based service
- Sun path simulation
- Autodesk Revit API – High Integration
- Family editor enhancements
- Inventor to Revit BIM exchange



Greater Design Productivity

Enhanced Usability

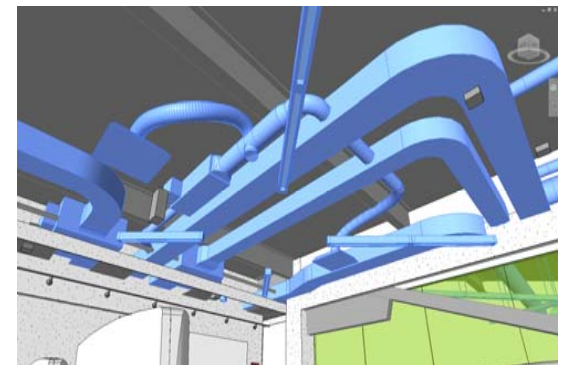
- Cable tray and conduit modeling
- MEP fixture management
- Panel schedule templates and demand factors
- Panel schedule instances
- Valve/fittings in section/elevation
- UI Improvements
- Performance Enhancements



Improved Quality

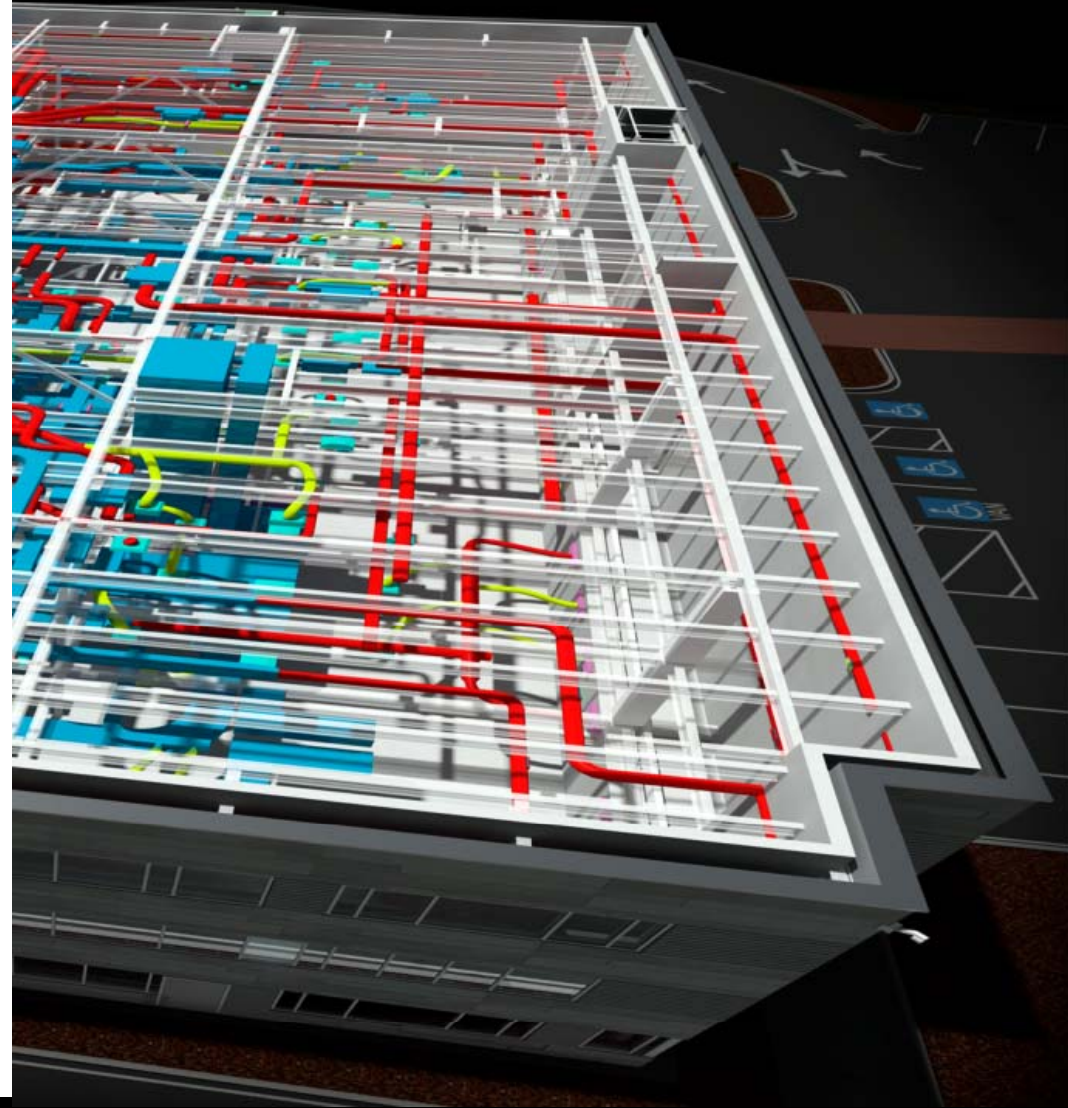
Fit and Finish

- MEP design content
- Temporary dimensions
- Tag on placement & by category
- Linked file improvements
- Improvements to AutoCAD export
- Documentation & design user enhancements
- Text & leader improvements



S = Feature only available via Subscription

Enhanced Design Functionality

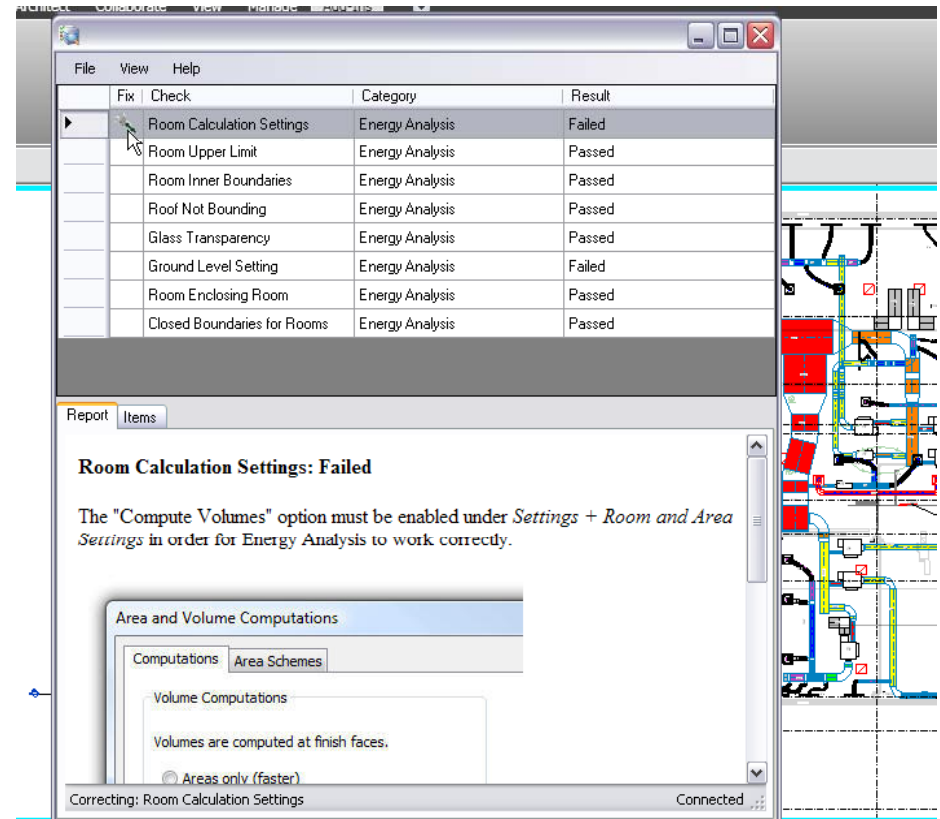
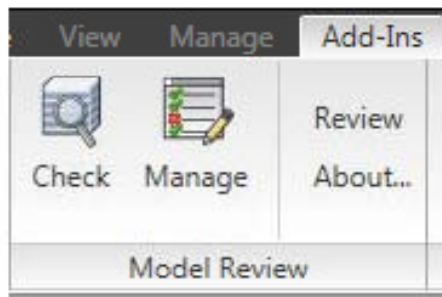


Enhanced Design Functionality

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Model Review

- Help audit building information
- Promote adherence to standards
- Help maintain model consistency



Help save time by automating the process of reviewing and evaluating building information models

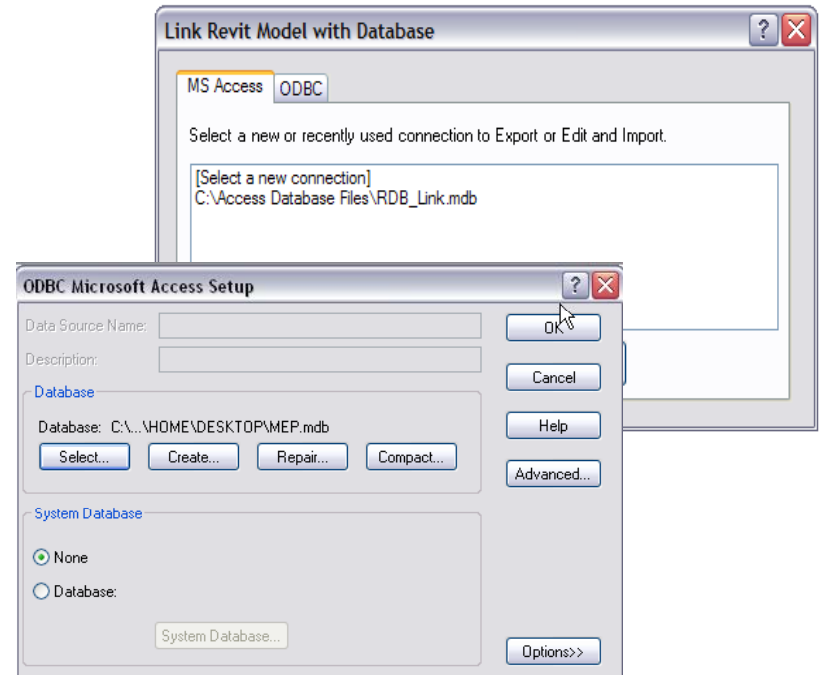
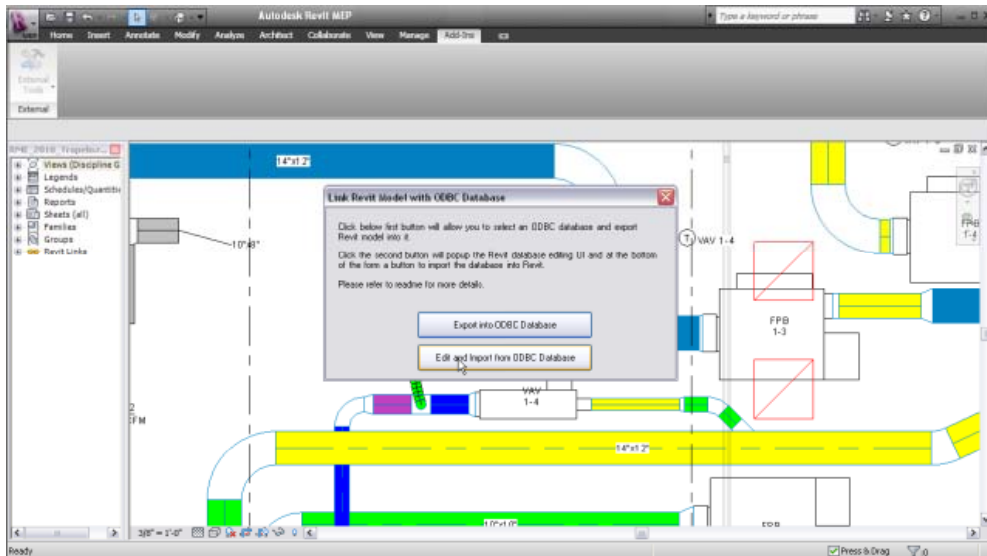
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Enhanced Design Functionality

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Autodesk® Revit® DB Link

- Import/export model information
- Help maintain relationships
- Update graphic/nongraphic information



Import and export data between an Autodesk Revit MEP project and an external database

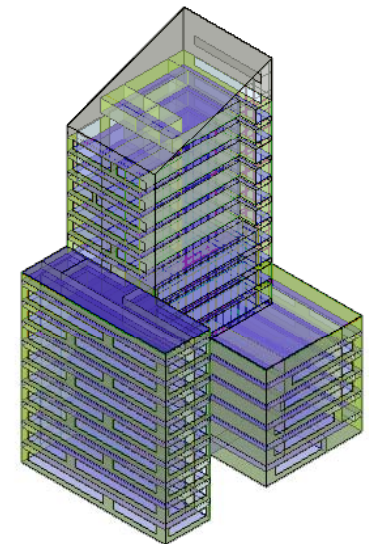
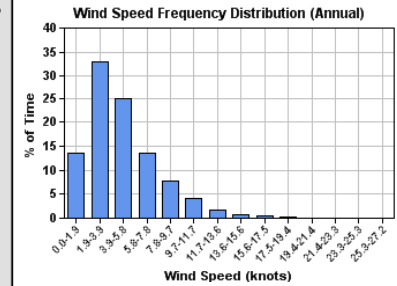
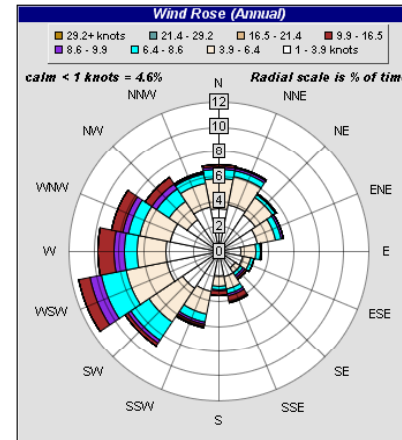
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Enhanced Design Functionality

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Access to Autodesk® Green Building Studio® web-based service

- Whole building energy, carbon and water analysis
- Global weather data
- Powerful “cloud computing”



Extending BIM to Sustainable Design

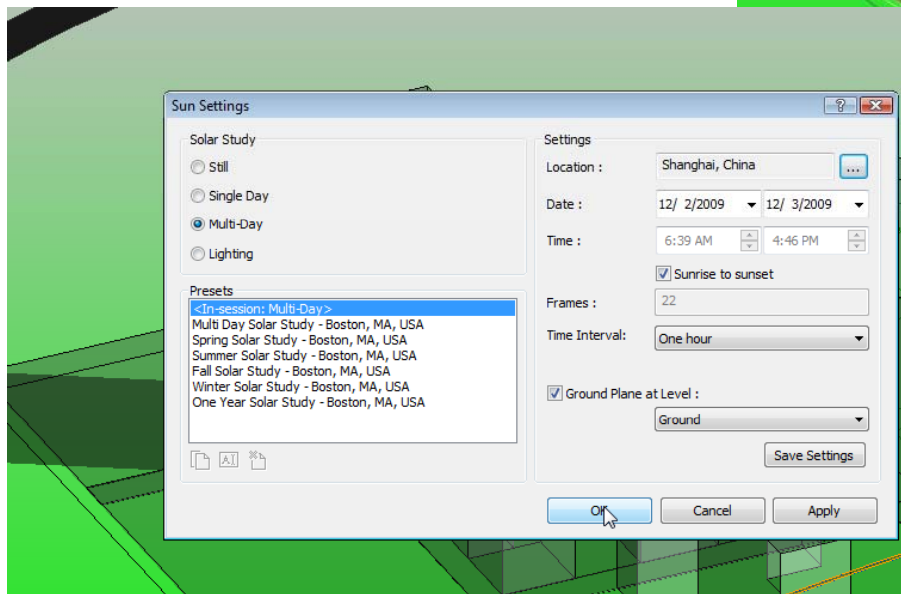
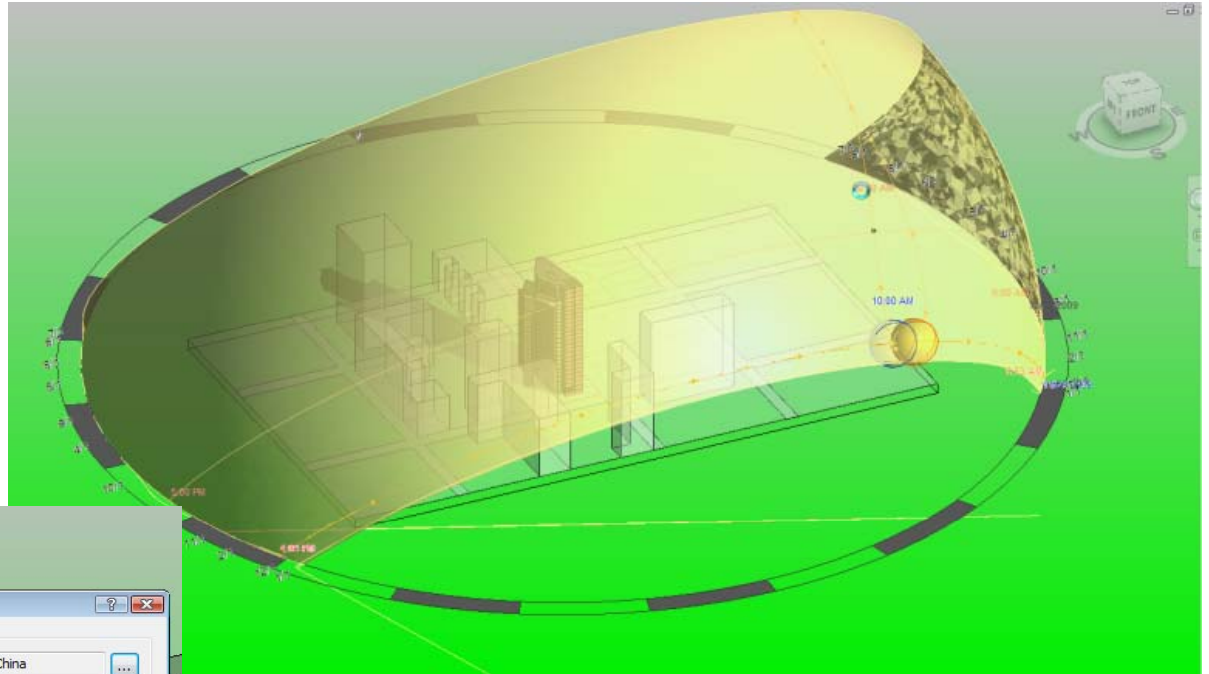
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Enhanced Design Functionality

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Sun Path Simulation

- Evaluate sun path
- Simulate shadows
- Analyze sun impact



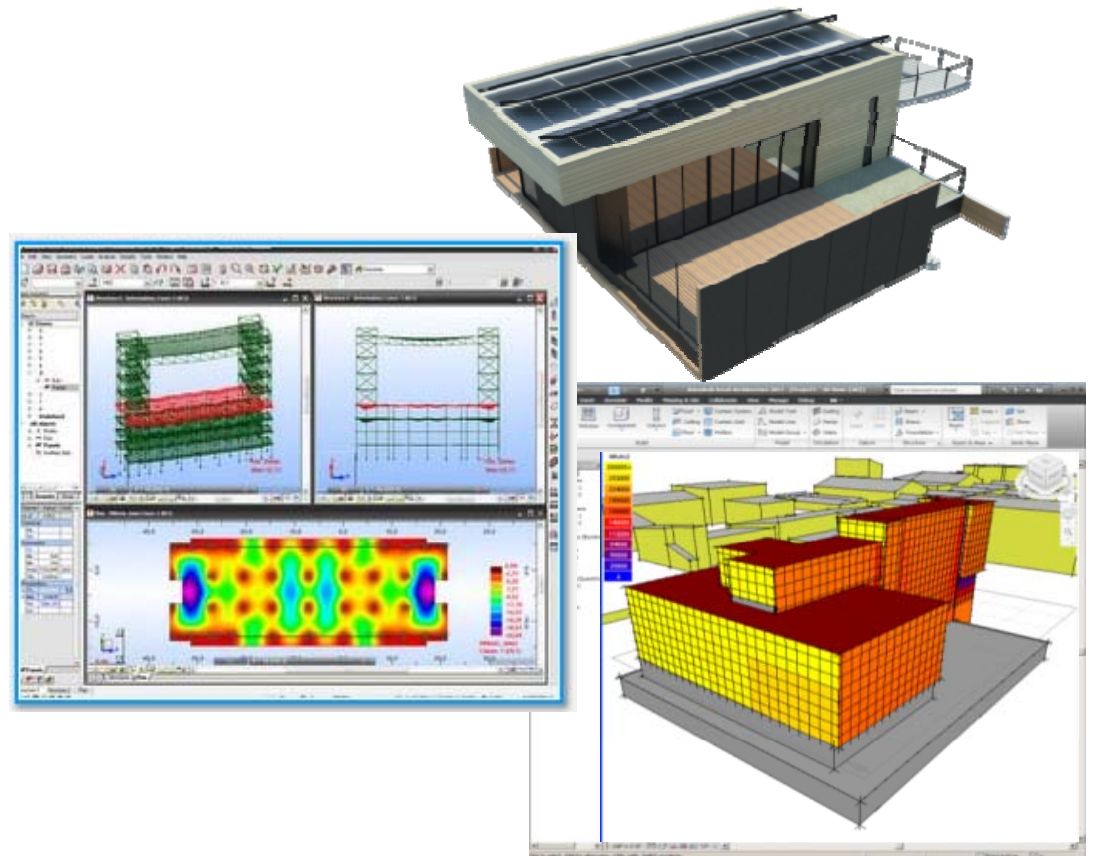
Better understand the impact of the sun and sun path

Enhanced Design Functionality

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Autodesk Revit API – High Integration

- Dynamic model update
- Analysis visualization framework
- Advanced selection & element filtering
- Model update on demand
- New UI tools
- Application idling event
- Custom error handling



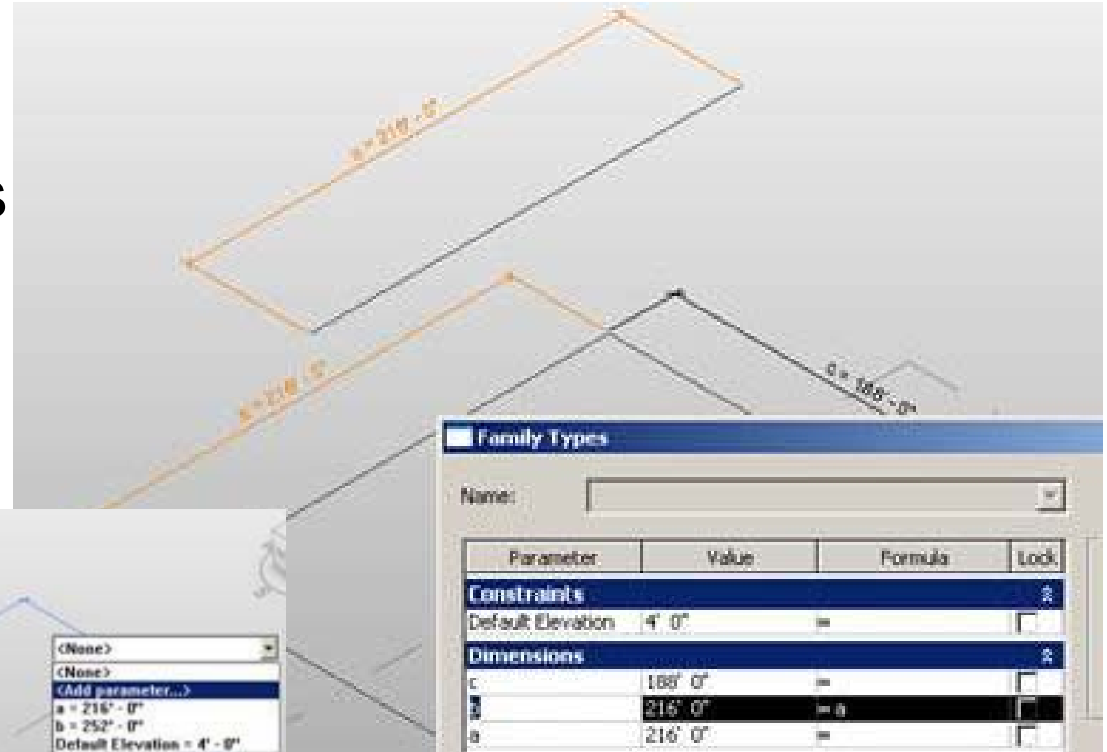
Integration with Revit is now easier than ever with the new Revit API enhancements.

Enhanced Design Functionality

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Family Editor Enhancements

- Reporting parameters
- Loose-labeled dimensions
- Visual display of related parameters



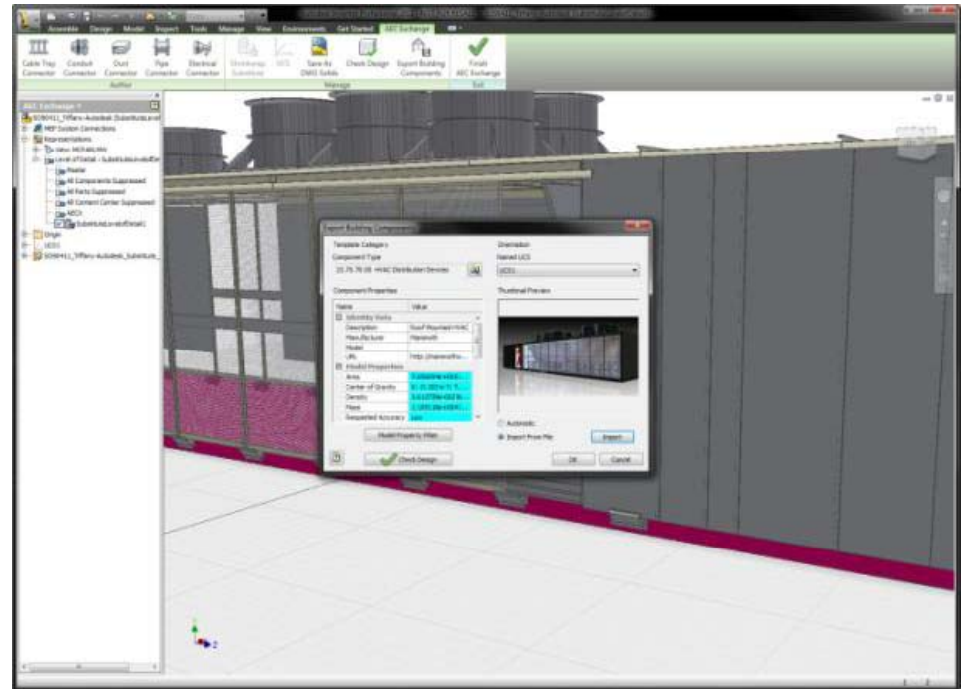
Easier access to powerful family editor features

Enhanced Design Functionality

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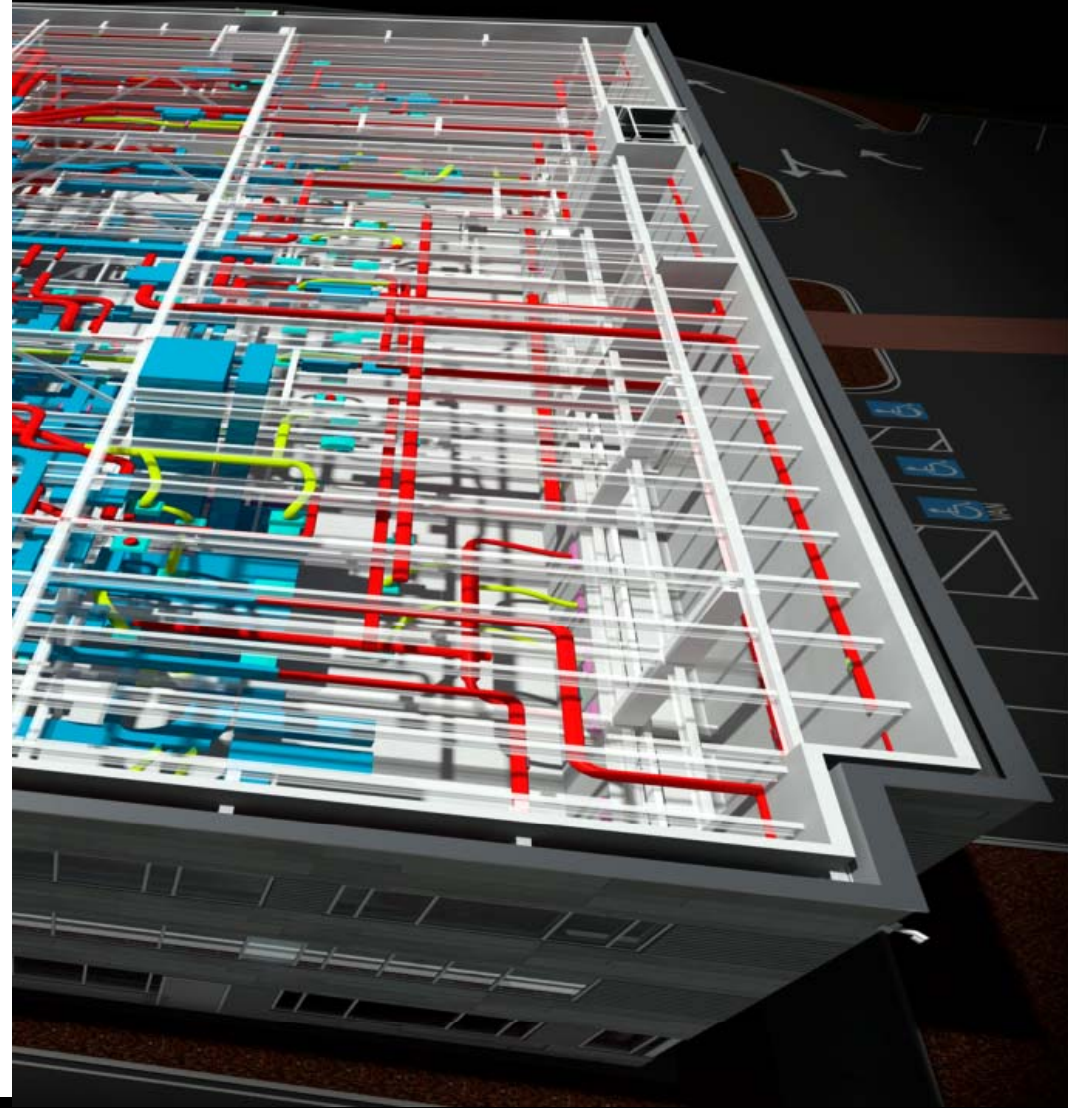
Inventor to Revit BIM Exchange

- Improved data sharing
- Maintains visual fidelity
- Support new connector types
- Support for motor property



Leverage manufacturer specific content that is geared to AEC

Greater Design Productivity

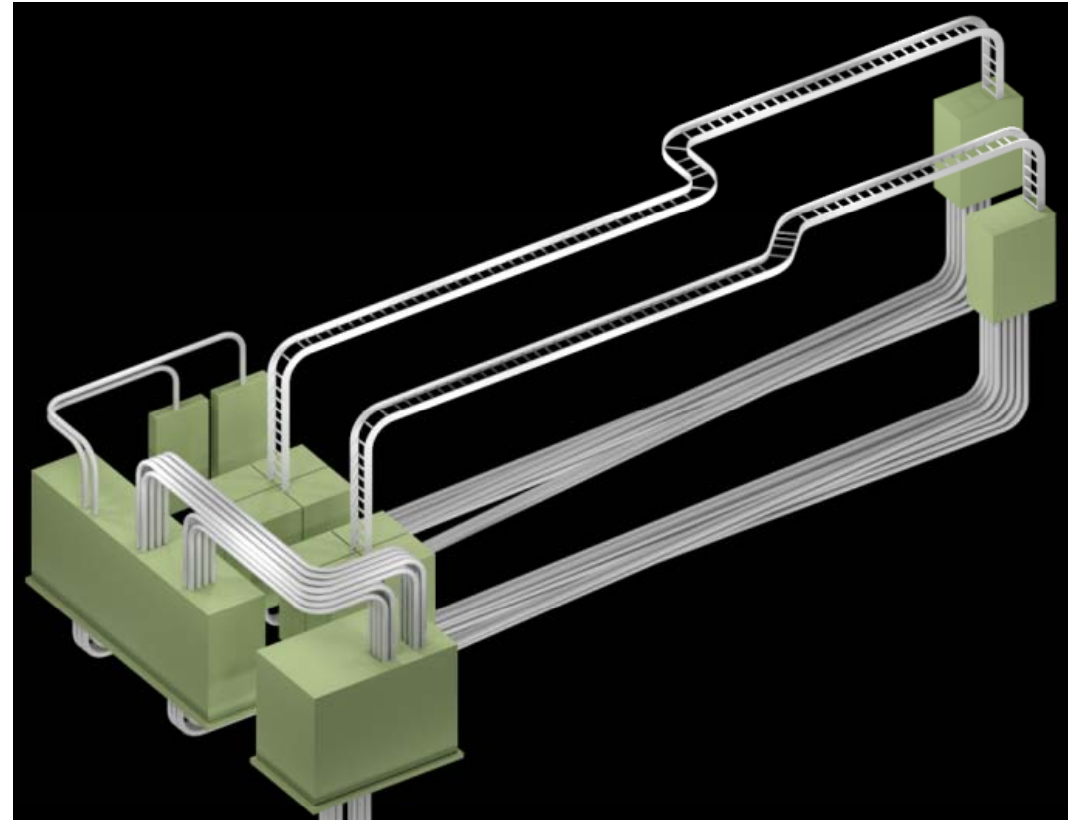
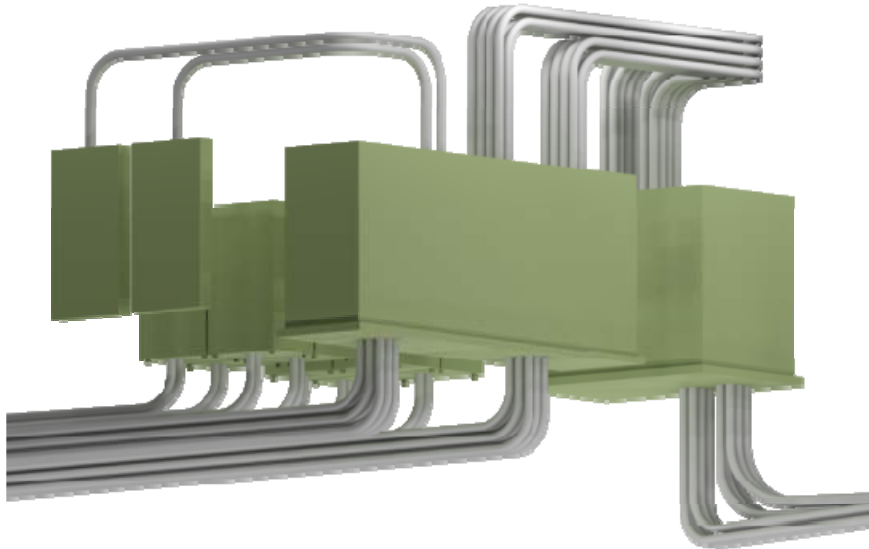


Greater Design Productivity

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Cable Tray and Conduit Modeling

- Coordination with other disciplines
- Model with or without fittings
- Adjustable bend radius
- Schedule runs



Represent conduit and cable tray for coordination, and more accurate and legible construction drawings

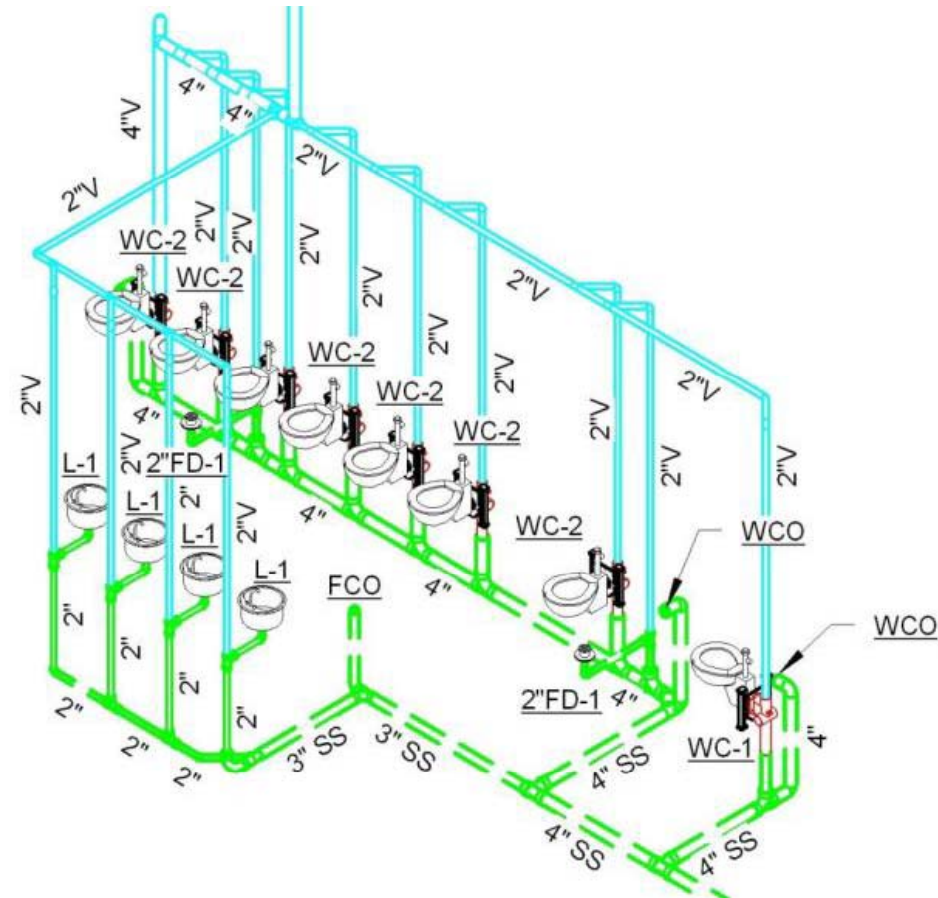
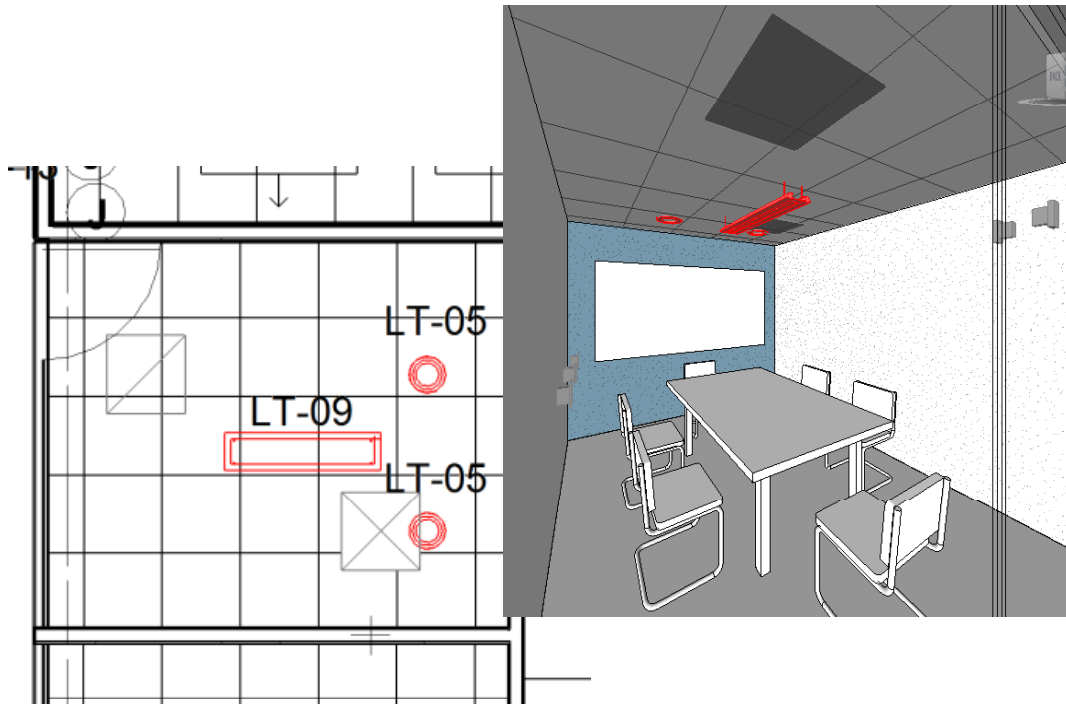
Images courtesy of TME, Inc.

Greater Design Productivity

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MEP Fixture Management

- Use MEP fixtures placed by architect
- Automatically create copy in MEP file



Copy, monitor, and utilize the architect's fixtures in a MEP design model

Greater Design Productivity

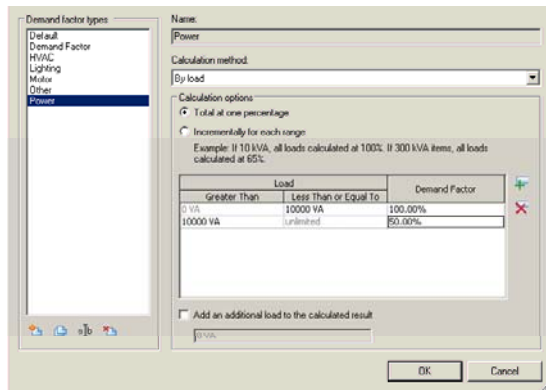
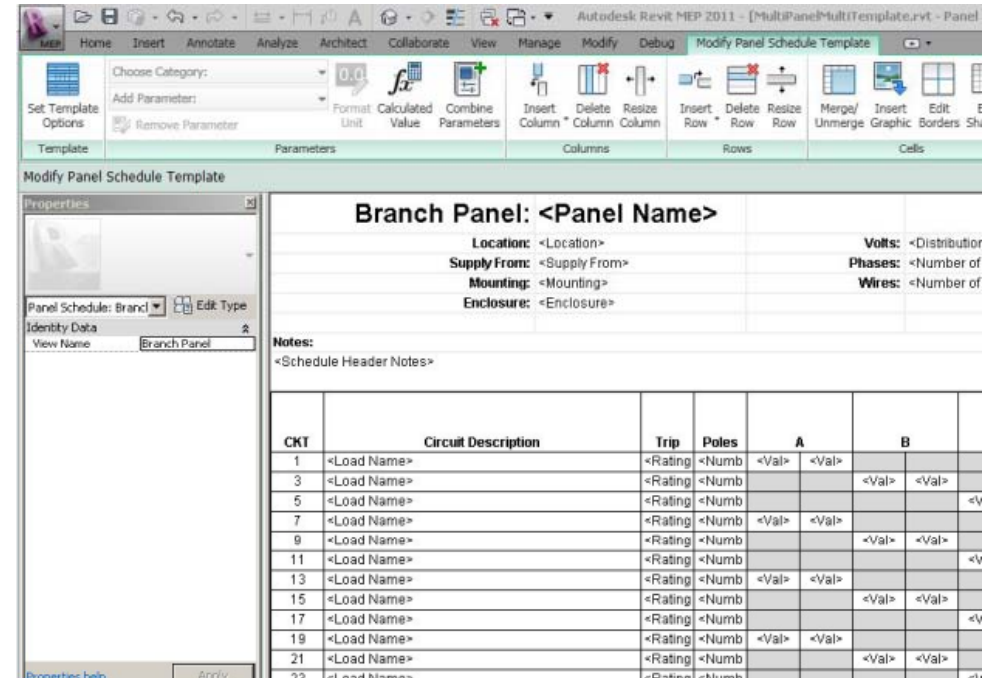
Autodesk® Revit® MEP 2011

Panel Schedule Template

- Customizable
- Consistent size
- Templates for various styles
- Consistent look on sheets
- International circuit naming

Demand Factors

- Support for NEC DF types
- User-definable load classifications



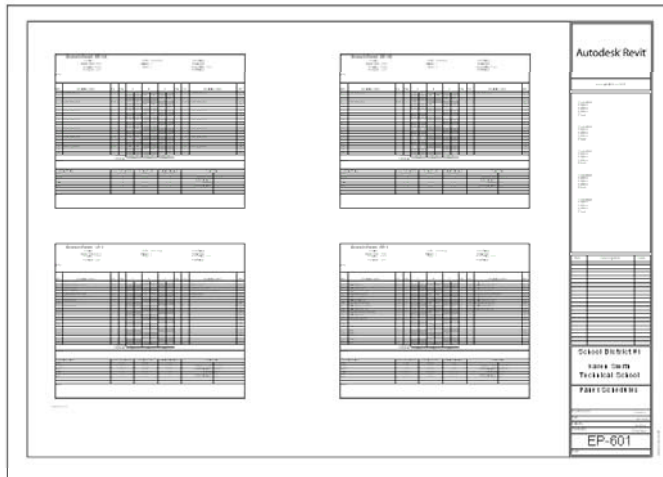
Customize panel schedules based on company standards and define load classifications

Greater Design Productivity

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Panel Schedule Instances

- Format based on template
- Lock circuits
- Group circuits
- Assign spares and spaces
- Rebalance loads
- Move circuits



CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	Power Mech 107	20 A	1	900 VA	1800 VA			1	20 A	Power Room 109, 103, 105	2
3	Power Room 115	20 A	1		900 VA	1800 VA		1	20 A	Power Room 121, 122	4
5	Power Foyer 112C	20 A	1			1440 VA	1440 VA	1	20 A	Power Room 108, 104	6
7	Power Room 111, 112A	20 A	1	1800 VA	1080 VA			1	20 A	Power Manager 134	8
9	Power Workshop 130	20 A	1		1800 VA	1080 VA		1	20 A	Power Room 101, 111, 112A	10
11	Power Workshop 132	20 A	1			1800 VA	1080 VA	1	20 A	Power Room 118	12
13	Power Lounge 150	20 A	1	1260 VA	1440 VA			1	20 A	Power Room 123, 124	14
15	Power Room 101, 112A	20 A	1		1260 VA	1440 VA		1	20 A	Power Workshop 131	16
17	Power Room 112A, 112B	20 A	1			1260 VA	1440 VA	1	20 A	Power Workshop 133	18
19	Power Room 102, 110	20 A	1	1620 VA	1333 VA			3	20 A	Motor Workshop 114	20
21	Power Room 112A, 112B, 114	20 A	1		1620 VA	1333 VA		--	--	--	22
23	Power Room 116	20 A	1			1620 VA	1333 VA	--	--	--	24
25	Motor Workshop 114	20 A	3	1333 VA				--	--	--	26
27	--	--	--		1333 VA						28
29	--	--	--			1333 VA					30
31	Spare	0 A	1	0 VA							32
33	Spare	0 A	1		0 VA						34
35	Space	--	--			0 VA					36
37	Space	--	--	0 VA							38
39	Space	--	--		0 VA						40
41	Space	--	--			0 VA					42
Total Load:				12567 VA	12567 VA	12747 VA					
Total Amps:				35 A	35 A	35 A					

Legend:

Load Classification	Connected Load (VA)	Demand Factor	Estimated Demand (VA)	Panel Totals	
HVAC	0 VA	0.00%	0 VA	Total Conn. Load:	37880 VA
Lighting	0 VA	0.00%	0 VA	Total Est. Demand:	36880 VA
Other	0 VA	0.00%	0 VA	Total Conn.:	105 A
Power	29880 VA	100.00%	29880 VA	Total Est. Demand:	108 A
Motor	8000 VA	112.50%	9000 VA		

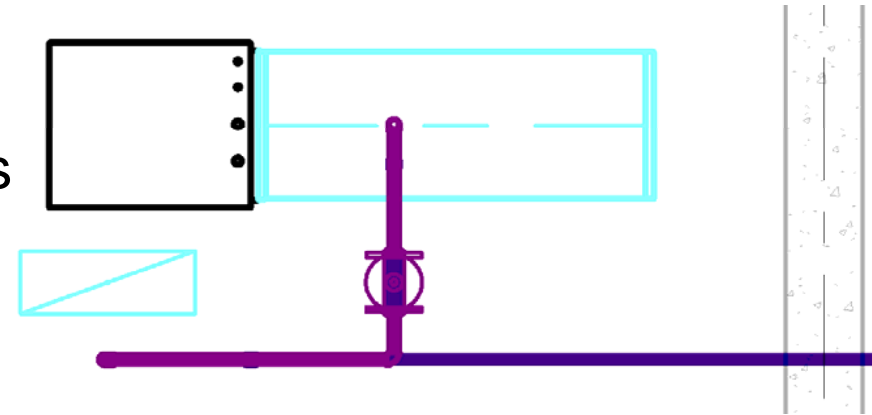
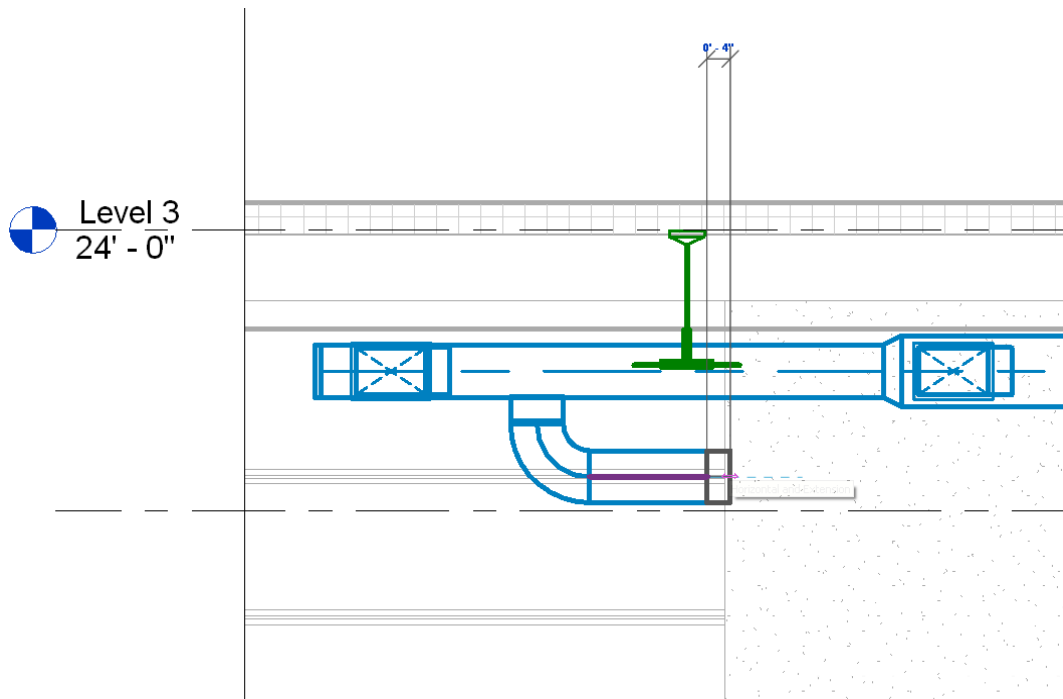
Customize panel schedules based on company standards and define load classifications

Greater Design Productivity

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Valve/Fittings in Section/Elevations/3D

- Model in sections/elevations
- Add/modify in sections/elevations
- Switch between sections and elevations



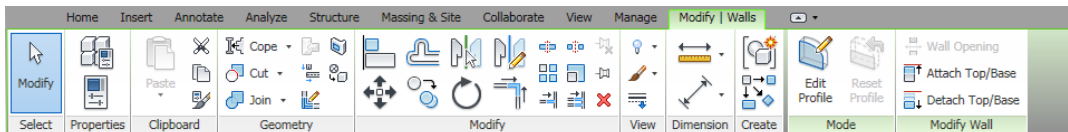
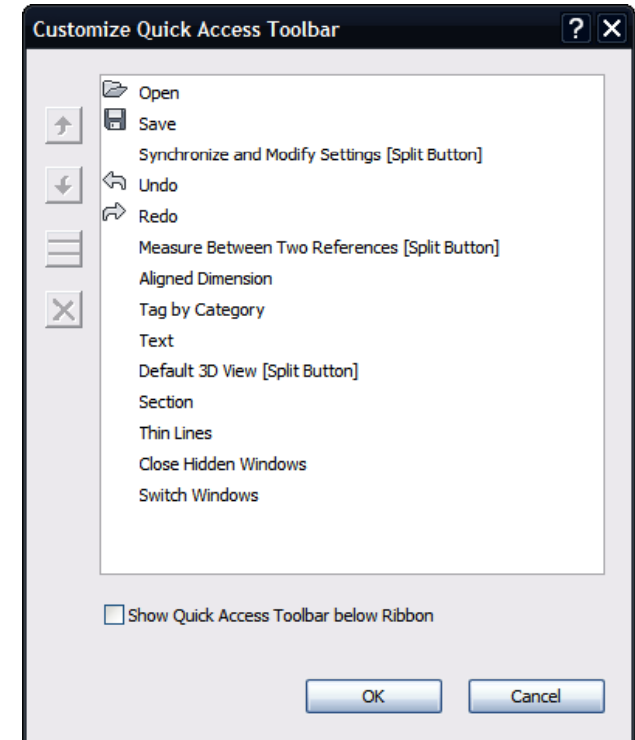
Design more accurately by modeling complex systems in section and elevation views

Greater Design Productivity

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UI Improvements

- Ribbon enhancements
- Properties Palette
- Quick access tool customization
- Status bar tools
- Modify tab/contextual switching
- Repeat last command
- Resizable dialog boxes



Easier access to tools and commands right at your finger tips

Greater Design Productivity

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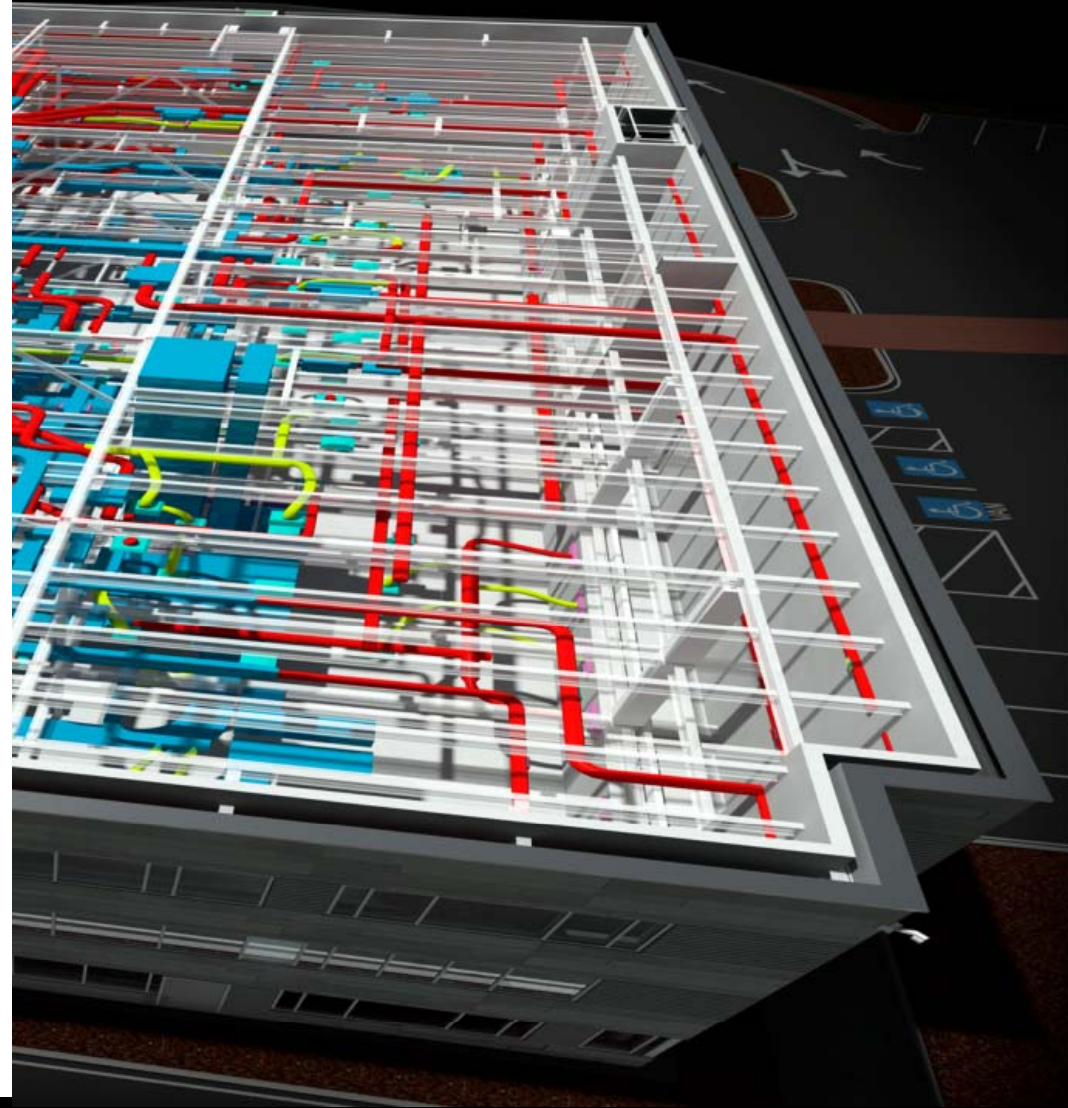
Performance Enhancements

- Application startup
- Model open
- Sync with central file
- Linked files
- UI reaction time
- Electrical circuits



Enhanced large team workflow and performance leads to better productivity

Improved Quality

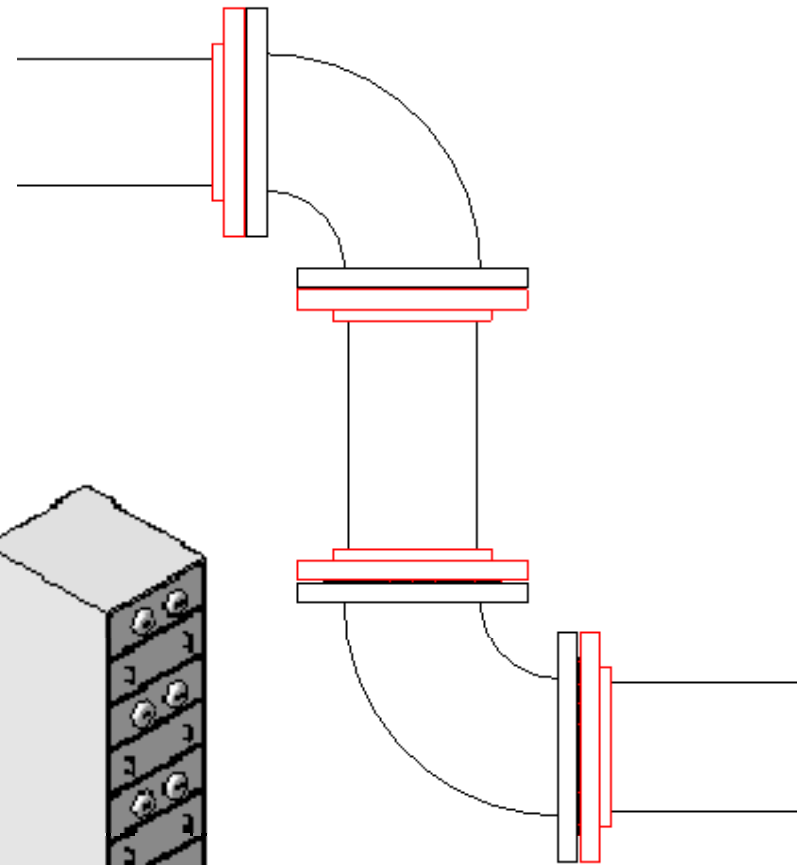
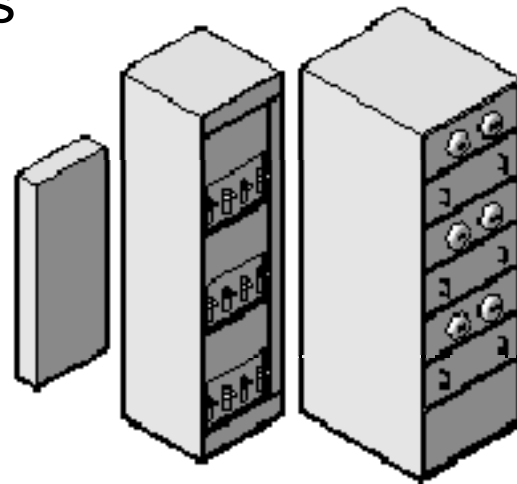
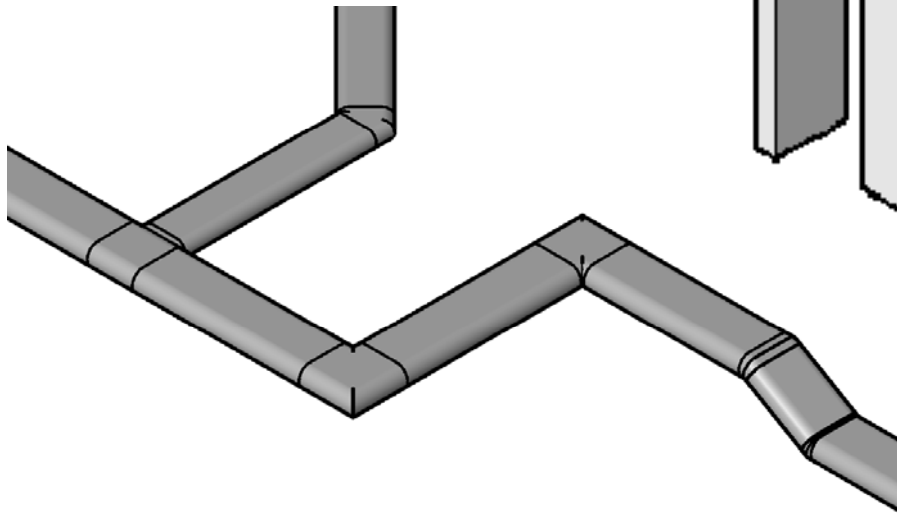


Improved Quality

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MEP Design Content

- Oval ducts
- Electrical content
- Piping companion flanges



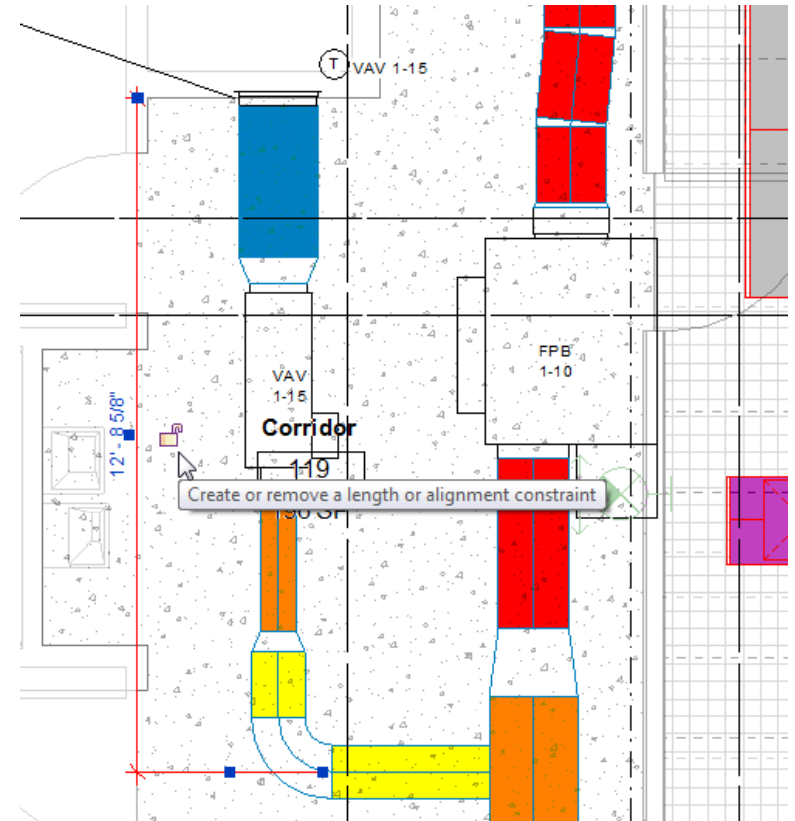
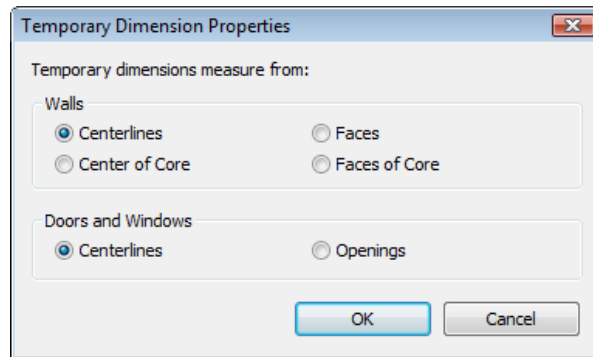
*Design flat oval duct systems,
and employ many new types of
electrical and piping content*

Improved Quality

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Temporary Dimensions

- Enhances placement accuracy
- Converts to permanent dimensions



Lay out or modify building services components more easily, quickly and with greater accuracy

Improved Quality

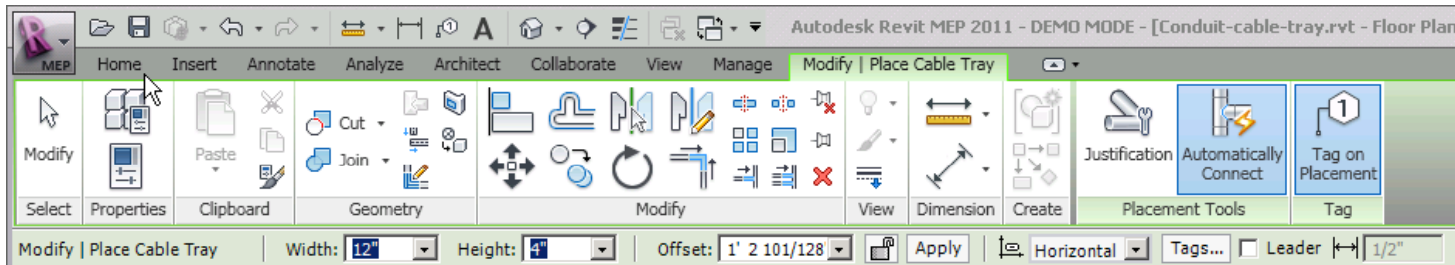
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Tag on Placement

- Tag on placement for MEP elements

Tag by Category

- Locate tag anywhere on placement



Tag MEP components as they are being placed to help increase productivity

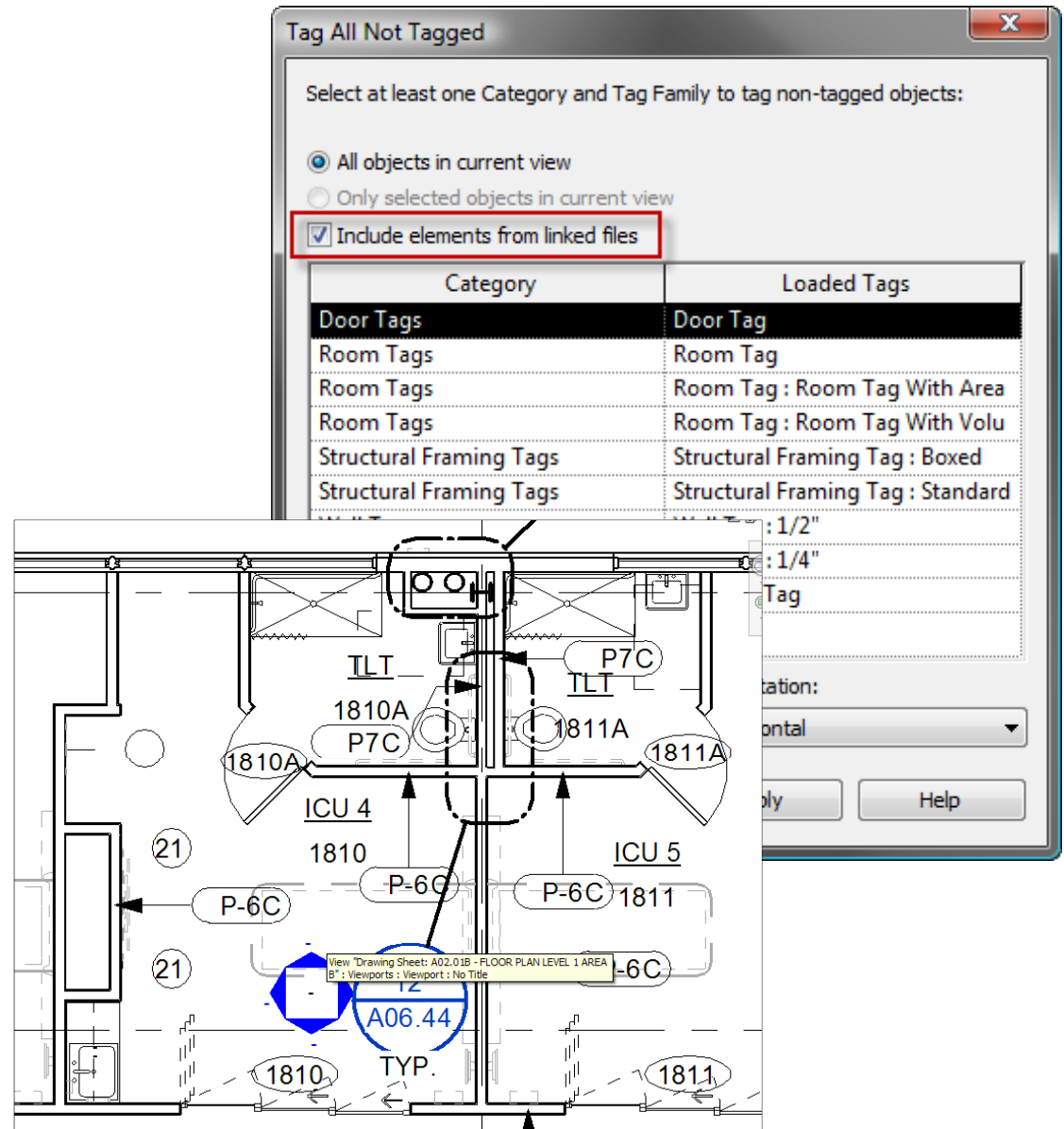
Improved Quality

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Linked File Improvements

- View filters
- Element tagging
- Workset visibility control
- Automatic ceiling grids

More fluid process when working with multiple models



Improved Quality

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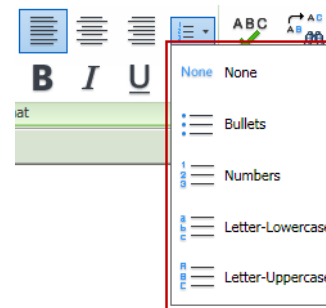
Text Improvements

- Create bullets and numbering
- Display box around text
- Text formatting shortcuts
- Find and replace in notes

Leader Improvements

- Enhanced leader attachment
- Ability to adjust leader end distance

- Create Bullets and Numbering
 1. Display Box around Text
 - a. Adjust Leader End Distance
 - A. Fixed Word Wrapping and Zoom Scaling Issues



Formatting Shortcuts

Bold	(Ctrl+B)
<i>Italic</i>	(Ctrl+I)
<u>Underline</u>	(Ctrl+U)

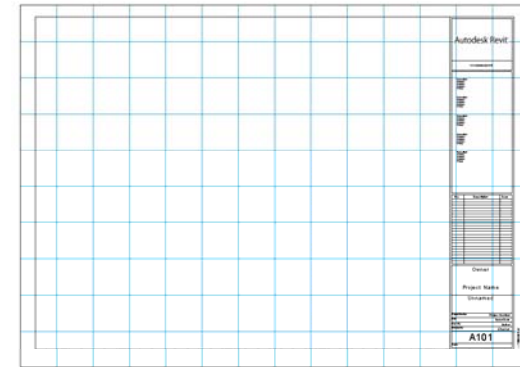
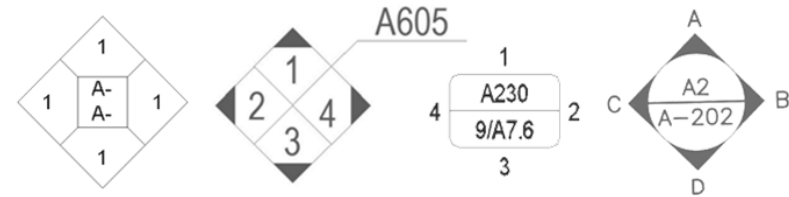
More choices available when placing your text and leaders

Improved Quality

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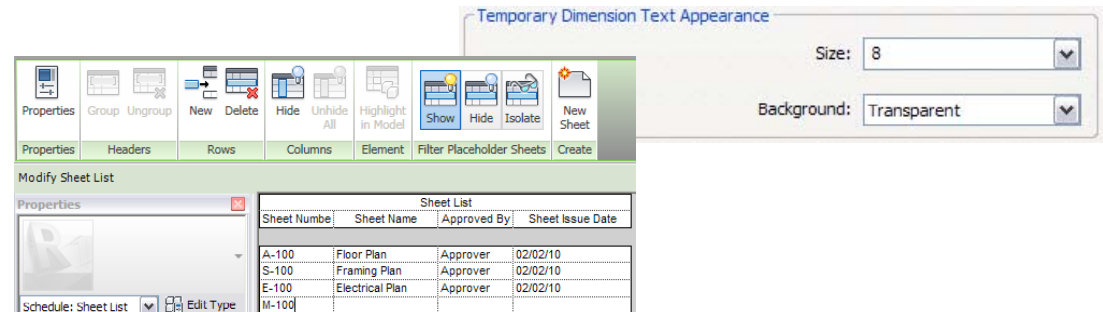
Documentation Enhancements

- Custom elevation tag
- Drawing list improvement
- Sheet layout grid



Design User Enhancements

- Object selection
- Temporary dimensions
- 3D alignment
- Keyboard shortcuts



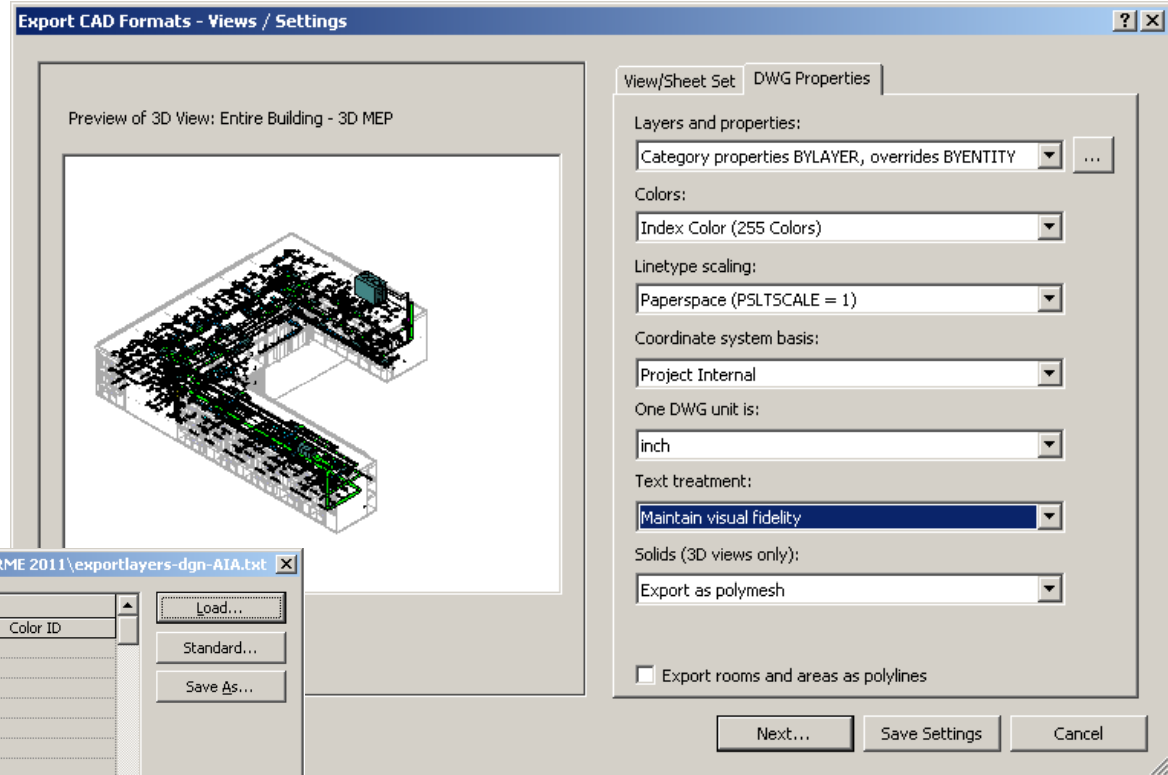
Small enhancements can lead to big design impacts

Improved Quality

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Improvements to AutoCAD Export

- Visual fidelity
 - Viewing
 - Printing
 - Exporting



Export Layers: C:\Documents and Settings\All Users\Application Data\Autodesk\RME 2011\exportlayers-dgn-AIA.txt

Category	Projection		Cut	
	Level Number	Color ID	Level Number	Color ID
Adaptive Points	Adaptive Points			
Lines	Lines			
Planes	Planes			
Points	Points			
Air Terminal Tags	Air Terminal Tags			
Air Terminals	Air Terminals			
Area Load Tags	Area Load Tags			
Area Tags	9	4		
Areas	Areas			
Color Fill	Color Fill			
Interior Fill	Interior Fill			
Reference	Reference			
Boundary Condi	12	3		
Brace in Plan View	Brace in Plan View Sy			
Cable Tray Fitting	7	4		
Cable Tray Fitting	10	7		
Center line	{ 10 }	7		
Cable Tray Tags	7	4		
Cable Trays	10	7		
Center line	{ 10 }	7		
Drop	{ 10 }	7		
Rise	{ 10 }	7		
Callouts	6	5		
Casework	59	2	59	2
Hidden Lines	{ 59 }	2	{ 59 }	2
Casework Tags	40	1		

Load... Standard... Save As...

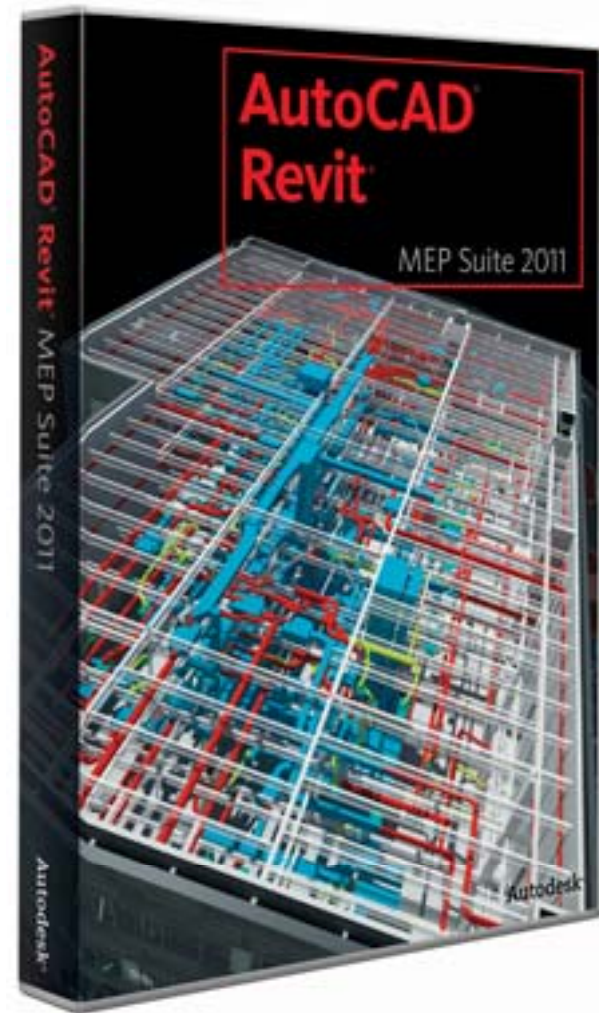
OK Cancel Help

Maintain the look and feel of a true AutoCAD drawing when exporting from Revit

Autodesk® Revit® MEP 2011

The building information modeling (BIM) solution for mechanical, electrical and plumbing (MEP) system design

- Enhanced design functionality
- Greater design productivity
- Improved quality



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