

ARCH 2431. Building Technology III

Building Information Modeling with Revit Day 01

The Revit Interface & Scavenger Hunt



R AUTODESK® **REVIT**®
DESIGN • CONNECT • OPTIMIZE



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Revit Interface

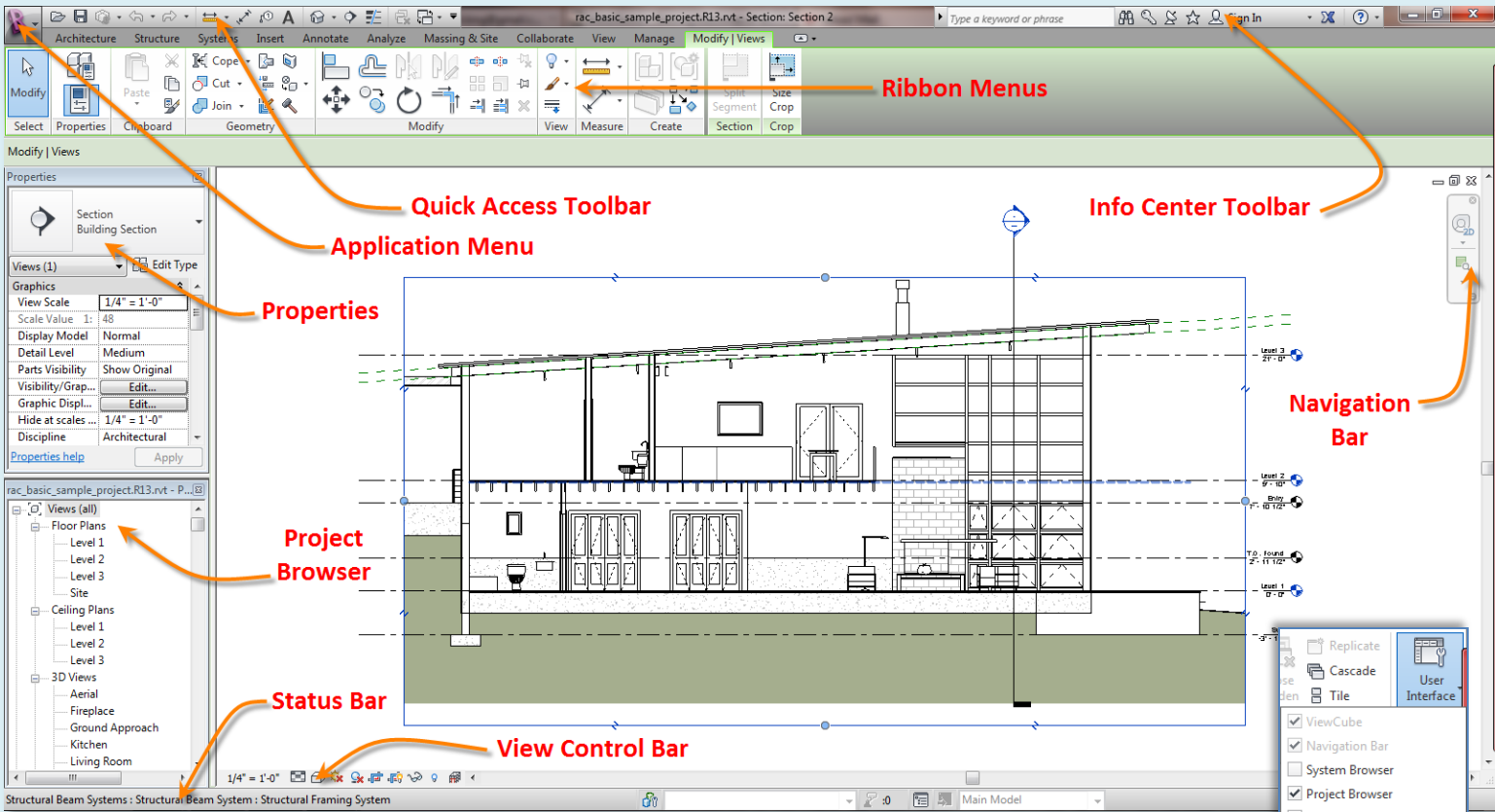
Day 01

Revit Interface

- Ribbons 1 2 3
- Quick Access
- Info Center
- View Control
- - Scale & Detail
- - Visual Styles
- - Sun Path
- - Cropping
- - Visibility Control
- - Hidden Elements

- Properties
- Project Browser
- Tabbed View

- New Sheet
- Add Views
- Plot to PDF



Settings on:

- **Viewcube, Navigation Bar, Properties, Project Browser, Status Bar, Status Bar – Worksheets, Status Bar – Design Options**

Day 01

Revit Interface

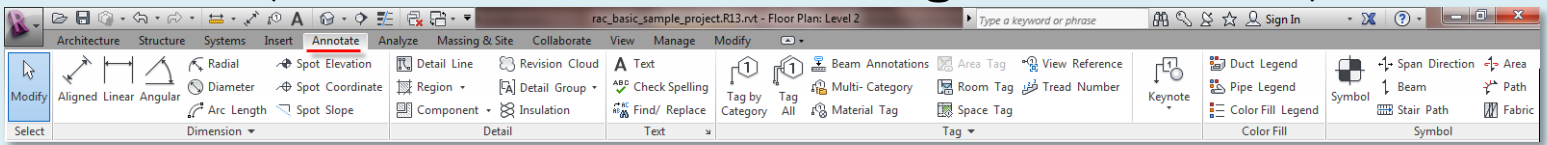
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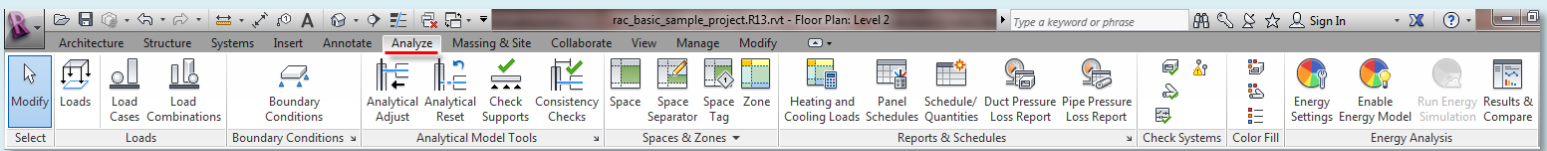
- New Sheet
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Ribbons 2 of 3

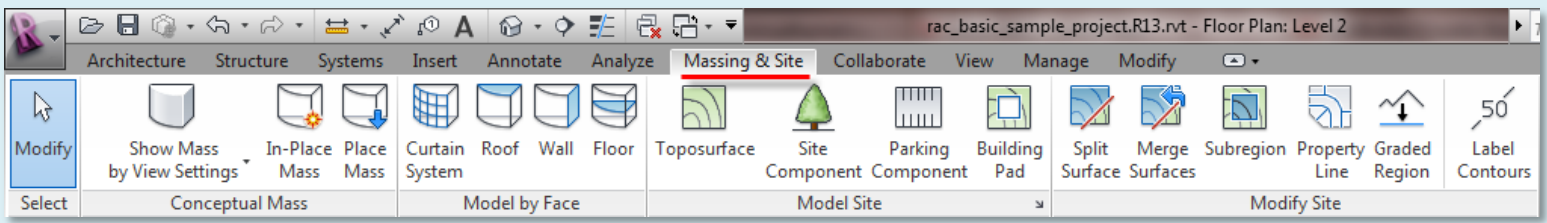
Annotate (dimensions, details, text, tags, color fill . . .)



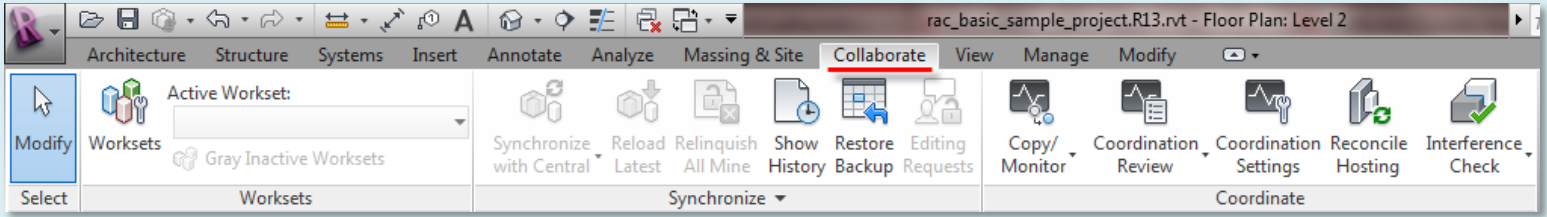
Analyze (loads, analytical model tools, energy analysis . . .)



Massing & Site (conceptual mass, model by face, model site . . .)

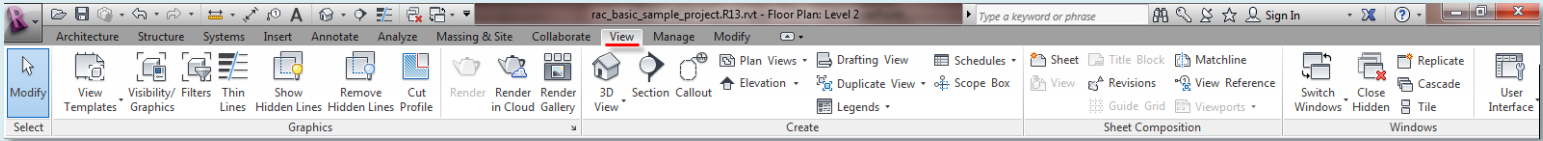


Collaborate (worksets, synchronize, coordinate . . .)

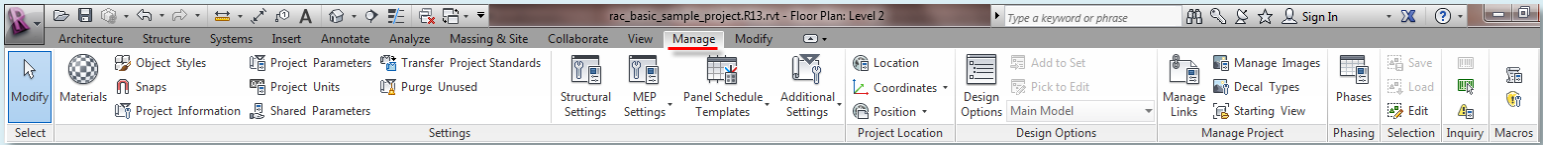


Ribbons 3 of 3

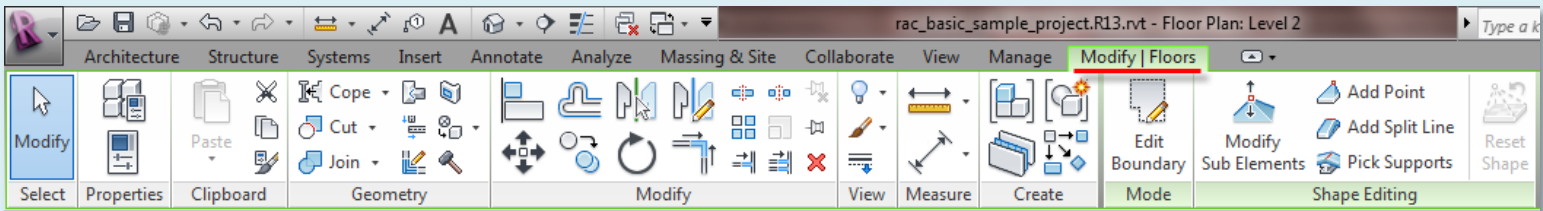
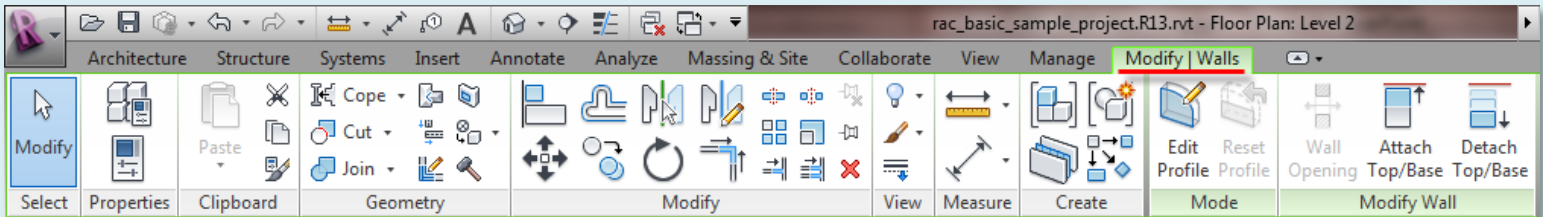
View (graphics, 3D, section, callout, plans, elevations . . .)



Manage (snaps, units, location, coordinates, position . . .)



Modify (options are dependant on object selection)



- Day 01**
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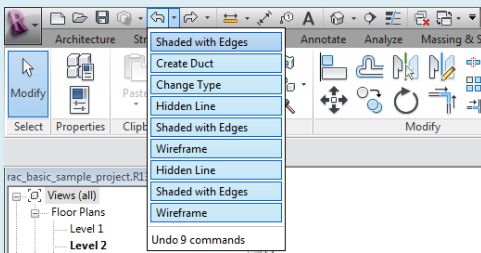
Properties
Project Browser
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Building Technology III

Quick Access Toolbar

Undo

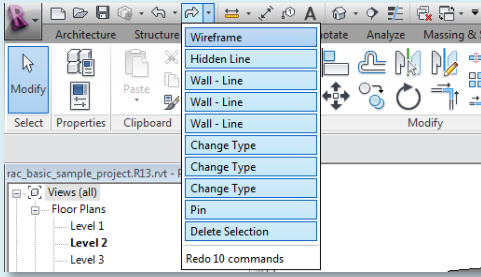


- New, Open, Save
- Synchronize
- Undo, Redo
- measure

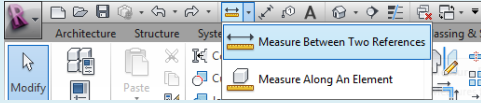
- aligned dimension
- tag by category
- text
- default 3D view

- section,
- thin lines
- close hidden windows
- switch windows

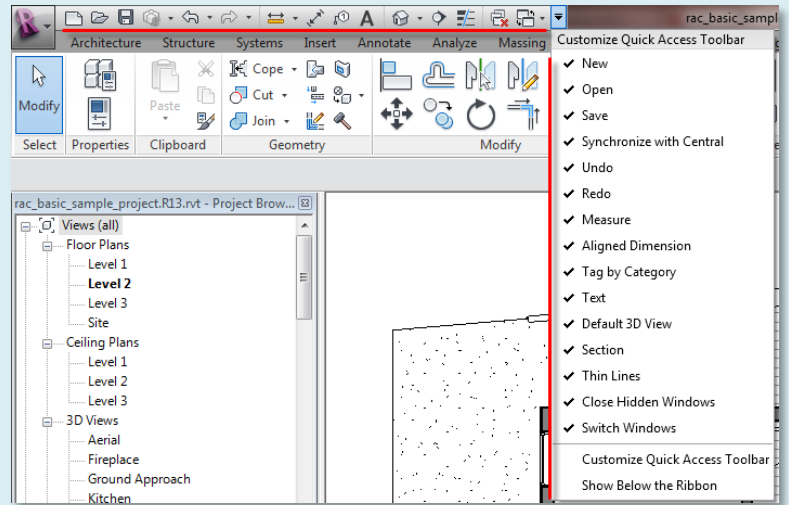
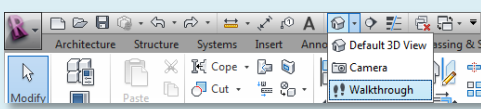
Redo



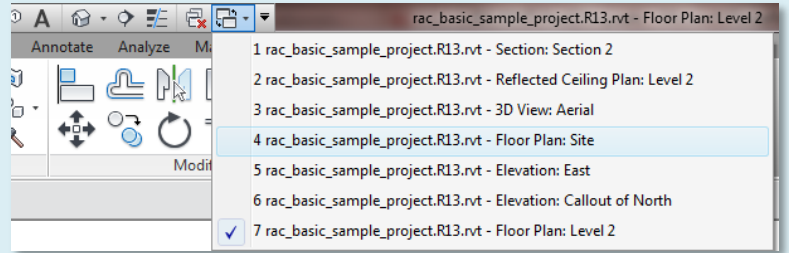
Measure



3D, Camera, Walkthrough



Close hidden windows & switch Windows



Day 01

Revit Interface

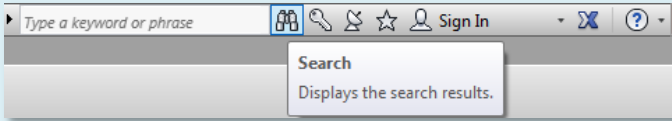
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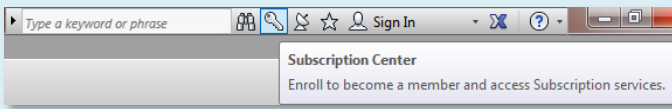
InfoCenter Toolbar

Search



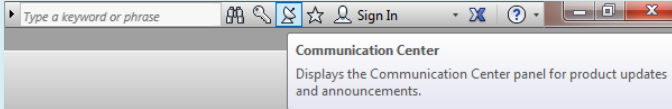
- **Search:**
<http://wikihelp.autodesk.com/search?q=>
Search on Autodesk wiki site

Subscription center



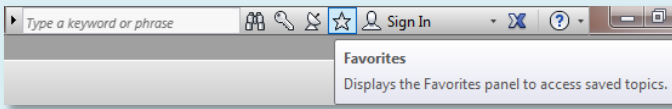
- **Subscription Center:**
Access to subscription service benefits

Communication Center



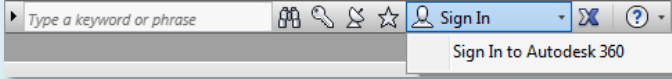
- **Communication Center:**
Access to RSS feeds on software issues

Favorites



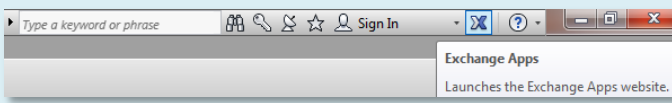
- **Favorites:**
Add search results to your favorites

Autodesk 360

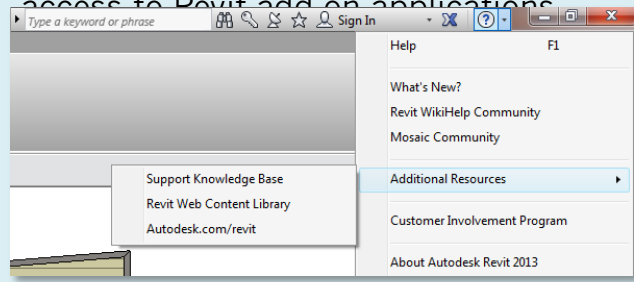


- **Autodesk 360**
Cloud centric storage and computing solution that provides each user with 3gb of free storage.

Exchange Apps



- **Exchange Apps:**
<http://apps.exchange.autodesk.com/>
access to Revit add on applications



View Control Toolbar (scale and details)

Day 01

Revit Interface

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Properties
Project Browser
Tabbed View

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Building
Technology III

Set View Scale

Custom...

- 12" = 1'-0"
- 6" = 1'-0"
- 3" = 1'-0"
- 1 1/2" = 1'-0"
- 1" = 1'-0"
- 3/4" = 1'-0"
- 1/2" = 1'-0"
- 3/8" = 1'-0"
- 1/4" = 1'-0"
- 3/16" = 1'-0"
- 1/8" = 1'-0"
- 1" = 10'-0"
- 3/32" = 1'-0"
- 1/16" = 1'-0"
- 1" = 20'-0"
- 3/64" = 1'-0"
- 1" = 30'-0"
- 1/32" = 1'-0"
- 1" = 40'-0"
- 1" = 50'-0"
- 1" = 60'-0"
- 1/64" = 1'-0"
- 1" = 80'-0"
- 1" = 100'-0"
- 1" = 160'-0"
- 1" = 200'-0"
- 1" = 300'-0"
- 1" = 400'-0"

1/8" = 1'-0"

Annotations adjust to selected scale

1/4" = 1'-0"

1/8" = 1'-0"

Coarse, medium or fine detail

Coarse

Medium

Fine

1/8" = 1'-0"

Coarse

Coarse

Fine

Fine

View Control Toolbar (visual styles)

Day 01

Revit Interface

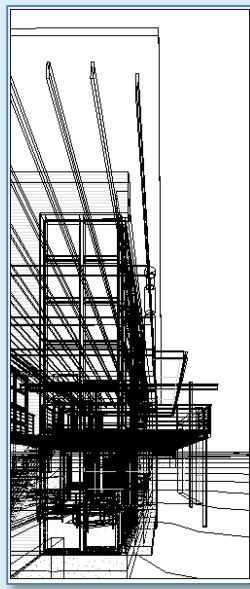
- Ribbons 1 2 3
- Quick Access
- Info Center
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Properties
Project Browser
Tabbed View

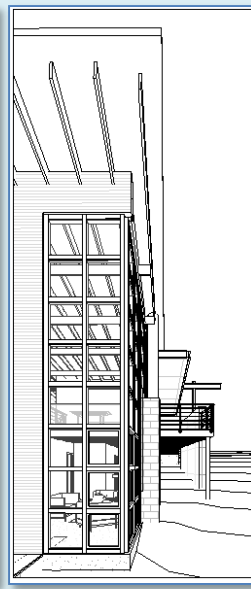
- New Sheet
- Add Views
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Building
Technology III

Wireframe



Hidden Line



Shaded



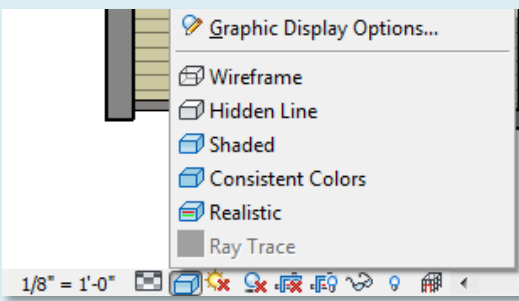
Consistent Colors



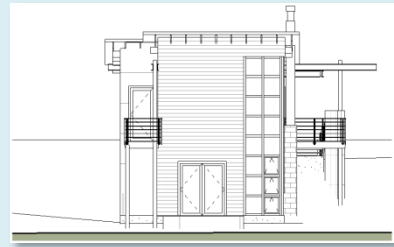
Realistic



Ray Trace



As you
increase
detail
you
slow
display



Shadows
off / on

View Control Toolbar (sun path)

Day 01

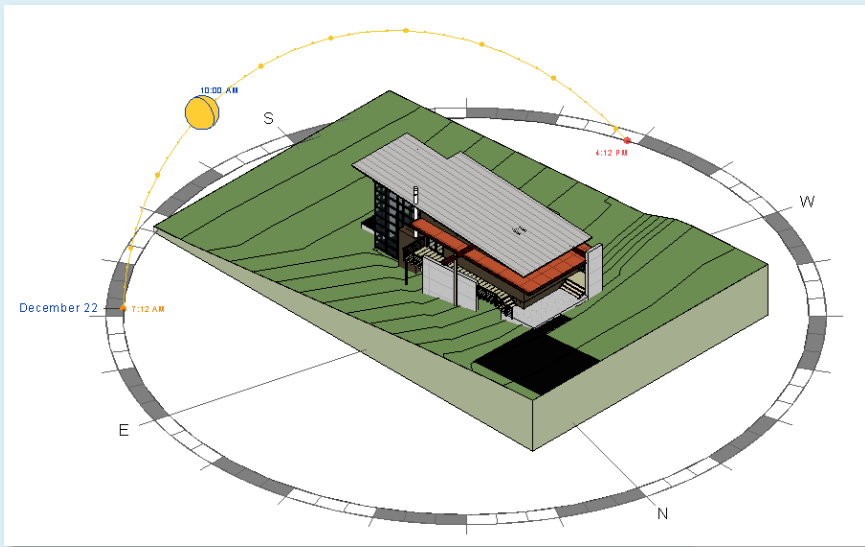
Revit Interface

- Ribbons 1 2 3
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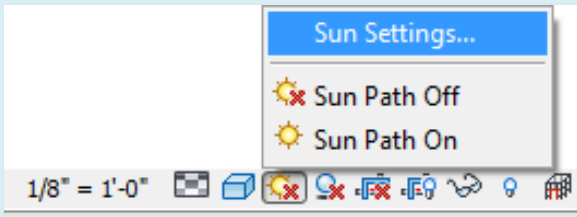
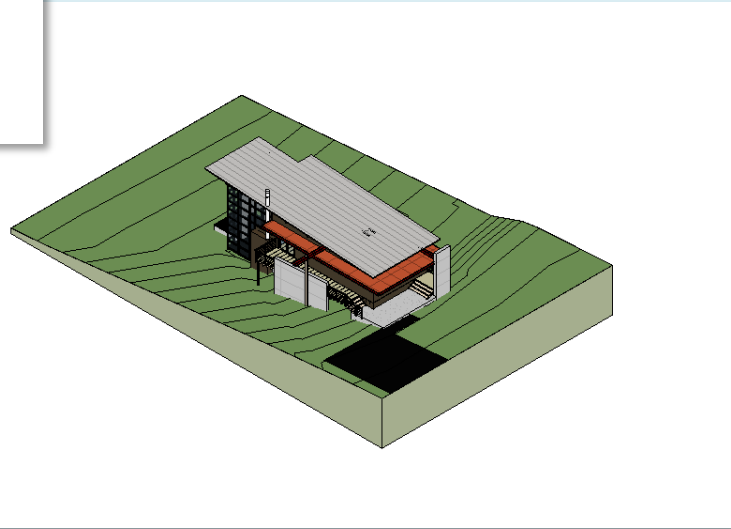
Properties
Project Browser
Tabbed View

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Building
Technology III



Turn Sun Path On & Off



Day 01

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Properties
Project Browser
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Building
Technology III

View Control Toolbar (cropping)

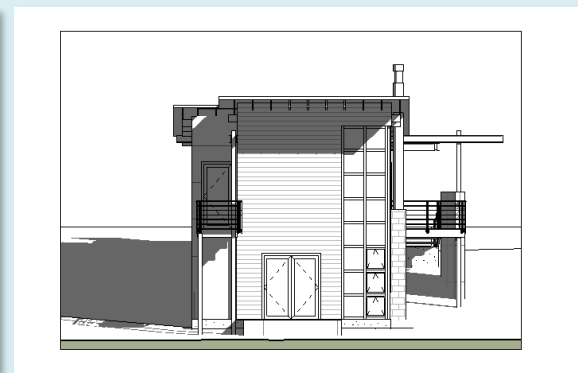
View with Cropping Off



View with Cropping On



Crop Region On



Day 01

Revit Interface

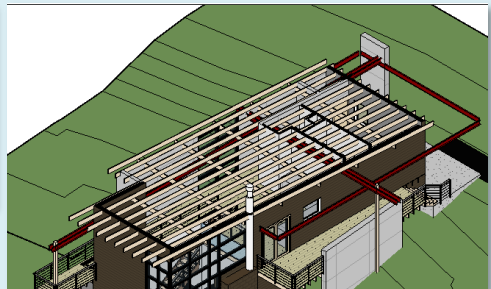
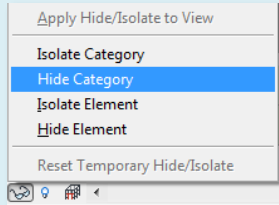
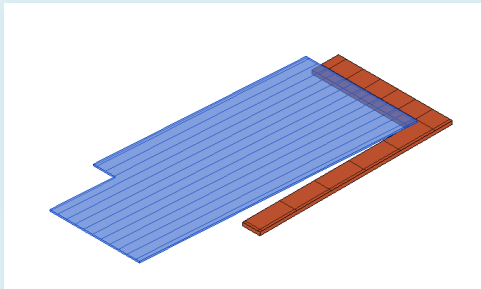
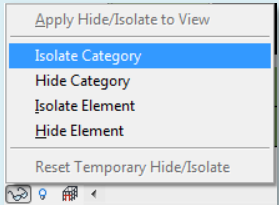
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- Properties
- Project Browser
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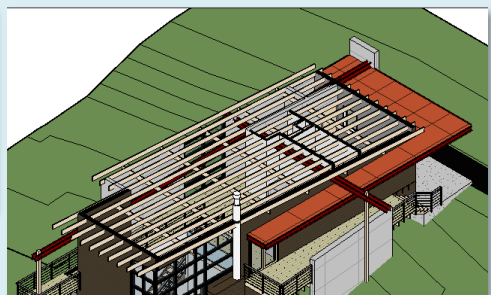
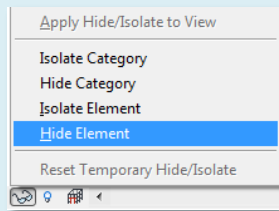
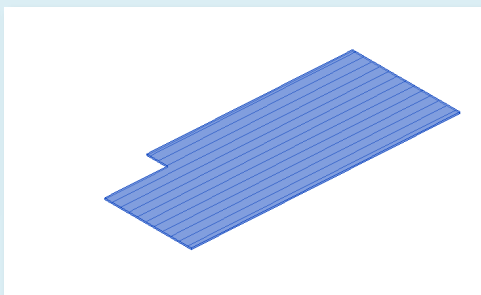
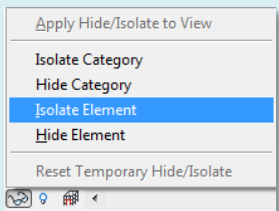
- New Sheet
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View Control Toolbar (visibility control)

Isolate Category



Isolate Element



View Control Toolbar (hidden elements)

Day 01

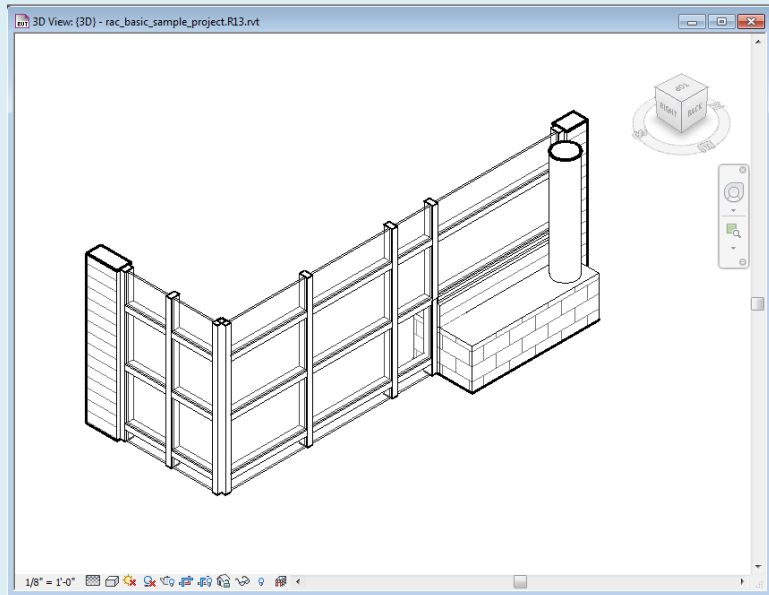
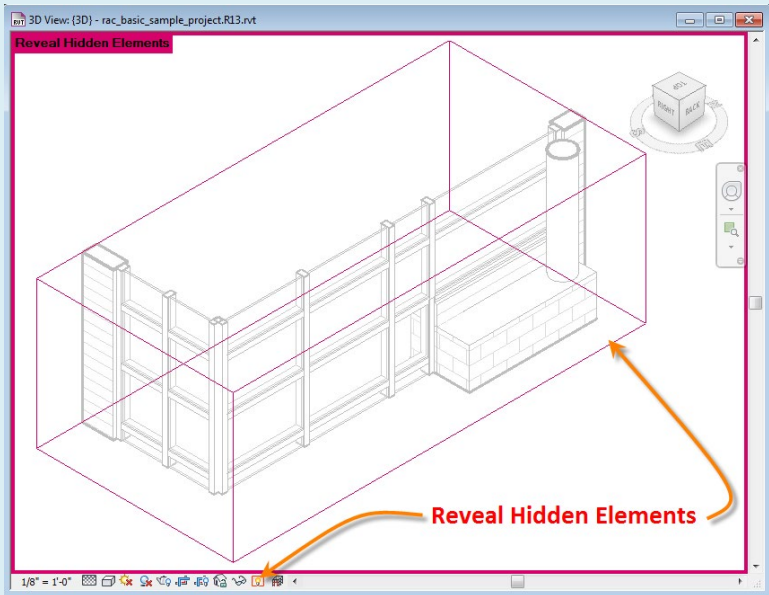
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- - Visibility Control
- - **Hidden Elements**

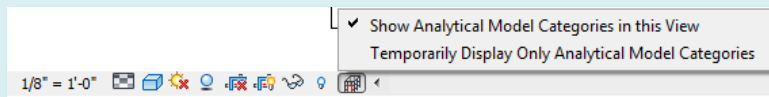
Properties
Project Browser
Tabbed View

- New Sheet
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Reveal Hidden Elements



Show Analytical Model Categories



Properties (of views or model objects)

Day 01

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Floor Plan View

Properties

Floor Plan

Floor Plan: Level 2 Edit Type

Graphics

View Scale	1/8" = 1'-0"
Scale Value 1:	96
Display Model	Normal
Detail Level	Medium
Parts Visibility	Show Original
Visibility/Grap...	Edit...
Graphic Displ...	Edit...
Underlay	None
Underlay Ori...	Plan
Orientation	Project North
Wall Join Disp...	Clean all wa...
Discipline	Architectural
Color Scheme...	Background
Color Scheme	<none>
System Color ...	Edit...
Default Analy...	None
Sun Path	<input type="checkbox"/>

Identity Data

View Template	<None>
View Name	Level 2
Dependency	Independent
Title on Sheet	
Referencing S...	
Referencing D...	

Basic Wall

Properties

Basic Wall
CORR

Walls (1) Edit Type

Constraints

Location Line	Wall Centerline
Base Constraint	T.O. Found
Base Offset	0' 0"
Base is Attached	<input type="checkbox"/>
Base Extension ...	0' 0"
Top Constraint	Up to level: L...
Unconnected H...	18' 0 137/256"
Top Offset	0' 0"
Top is Attached	<input checked="" type="checkbox"/>
Top Extension ...	0' 0"

Room Bounding

Related to Mass

Structural

Enable Analytic...	<input type="checkbox"/>
Structural Usage	Non-bearing

Dimensions

Length	55' 6"
Area	639.35 SF
Volume	461.10 CF

Identity Data

Comments	
Mark	
Phasing	

Double-Glass Window

Properties

Double-Glass 1
1800 x 2100

Doors (1) Edit Type

Constraints

Level	Level 2
Sill Height	0' 0"

Construction

Frame Type	
Materials and Fin...	
Frame Material	
Finish	

Identity Data

Comments	
Mark	4

Phasing

Phase Created	New Constru...
Phase Demolish...	None

Other

Head Height	6' 10 173/256"
-------------	----------------

Stair with open treads

Properties

Stair
open treads

Stairs (1) Edit Type

Constraints

Base Level	Level 1
Base Offset	0' 0"
Top Level	Level 2
Top Offset	0' 0"
Multistory Top ...	None

Graphics

Up text	UP
Down text	DN
Up label	<input checked="" type="checkbox"/>
Up arrow	<input checked="" type="checkbox"/>
Down label	<input checked="" type="checkbox"/>
Down arrow	<input checked="" type="checkbox"/>
Show Up arrow ...	<input type="checkbox"/>

Dimensions

Width	3' 0"
Desired Numbe...	18
Actual Number ...	18
Actual Riser Hei...	0' 6 9/16"
Actual Tread De...	0' 11"

Identity Data

Comments	
Mark	
Phasing	

Project Browser

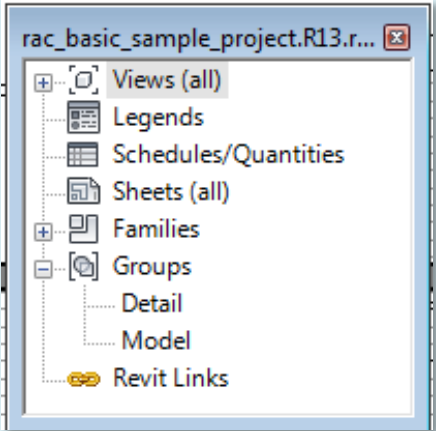
Day 01

Revit Interface

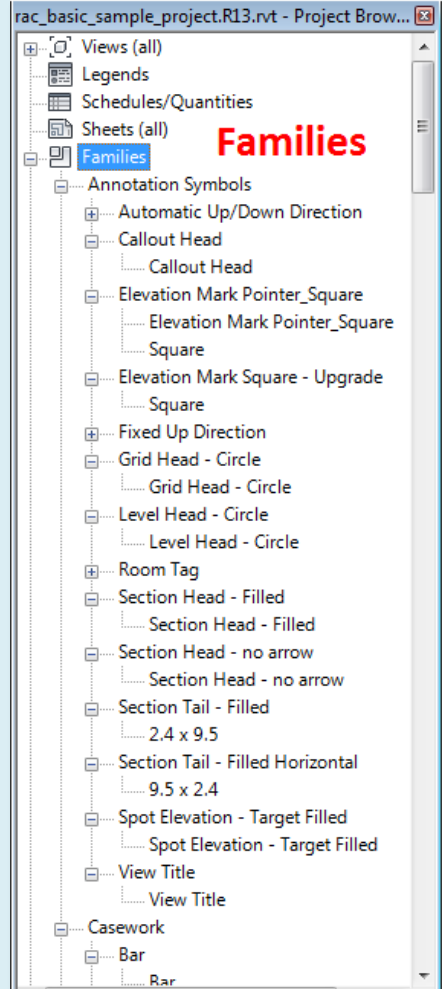
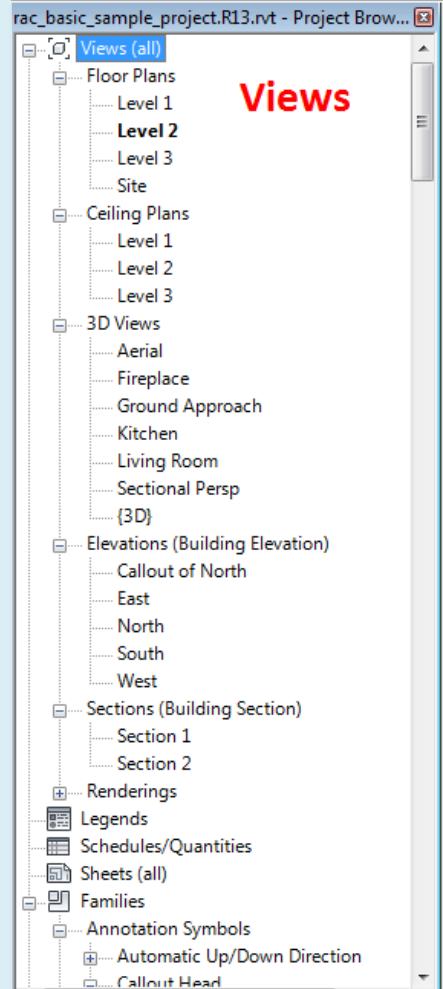
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Properties Project Browser Tabbed View

- New Sheet
- Add Views
- Plot to PDF



- Views (all)
- Legends
- Schedules/Quantities
- Sheets (all)
- Families
- Groups
- Revit Links



Properties/Project Browser Tabbed View

Day 01

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Properties Project Browser Tabbed View

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Drag apart

- Drag apart so properties is floating
- Drag it back until rectangle highlights

Drag until rectangle highlights then release

Project Browser

Project Browser - day01.rac_basic_...

Properties

Properties

3D View

3D View: Aerial

Graphics

Detail Level	Medium
Parts Visibility	Show Original
Visibility/Graphics...	Edit...
Graphic Display O...	Edit...
Discipline	Architectural
Default Analysis D...	None
Sun Path	<input type="checkbox"/>

Identity Data

View Template: <None>

View Name: Aerial

Dependency: Independent

Title on Sheet

Extents

Camera

Rendering Settings: Edit...

Locked Orientation:

Perspective:

Eye Elevation: 15107.7

Target Elevation: 1676.4

Camera Position: Explicit

Phasing

Phase Filter: Show All

Properties help

Apply

Sheet Layout (create new sheet)

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- Properties
Project Browser
Tabbed View

- **New Sheet**
- Add Views
- Plot to PDF

The screenshots illustrate the following steps:

- Accessing the **New Sheet...** option from the **Sheets** context menu.
- Choosing the **D 22 x 34 Horizontal.rfa** titleblock in the **Load Family** dialog.
- Clicking the **Load** button to load the selected titleblock.
- Confirming the selection in the **New Sheet** dialog.

Name	Date modified	Type
A 8.5 x 11 Vertical.rfa	1/21/2012 3:41 AM	RFA File
B 11 x 17 Horizontal.rfa	1/21/2012 3:41 AM	RFA File
C 17 x 22 Horizontal.rfa	1/21/2012 3:41 AM	RFA File
D 22 x 34 Horizontal.rfa	1/21/2012 3:41 AM	RFA File
E 34 x 44 Horizontal.rfa	1/21/2012 3:41 AM	RFA File
E1 30 x 42 Horizontal.rfa	1/21/2012 3:41 AM	RFA File

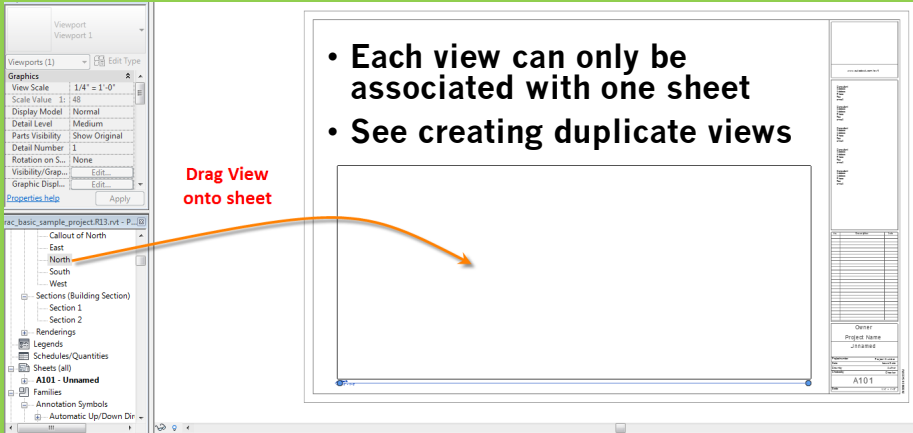
Sheet Layout (drag named views onto sheet)

Day 01

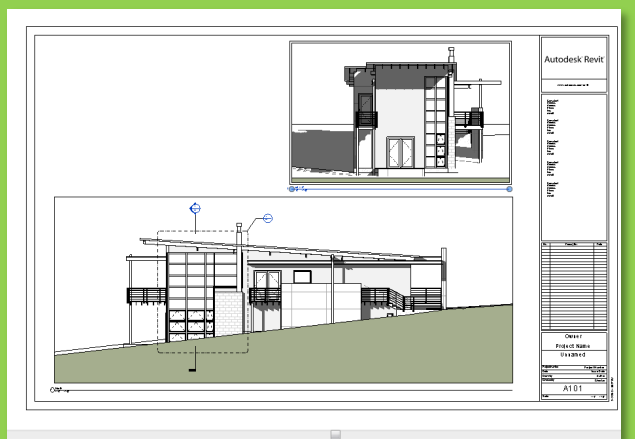
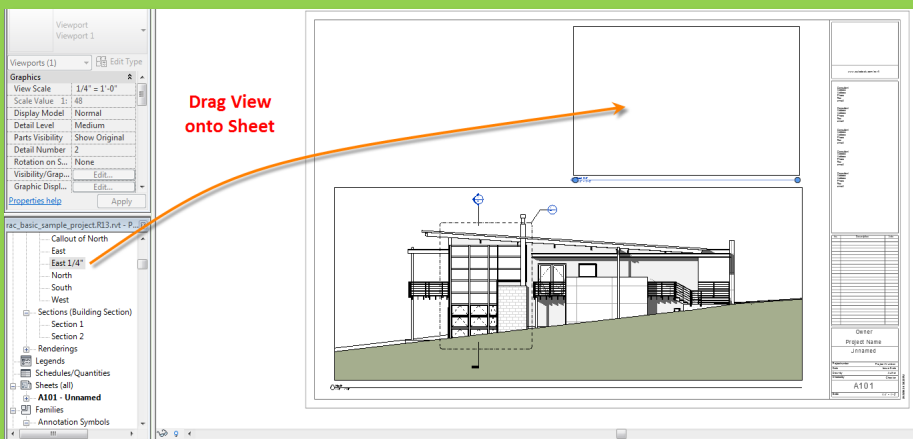
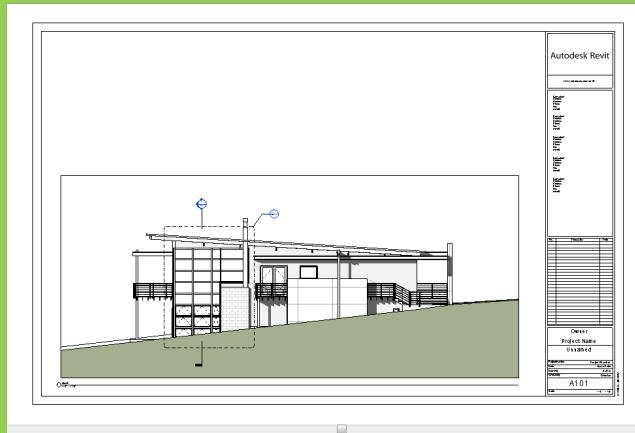
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- Each view can only be associated with one sheet
- See creating duplicate views



Plot to PDF

Day 01

Revit Interface

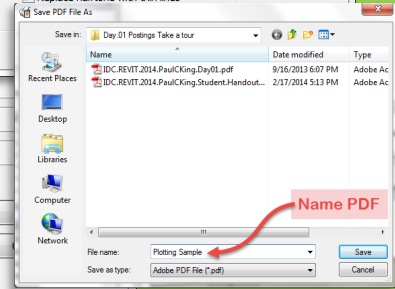
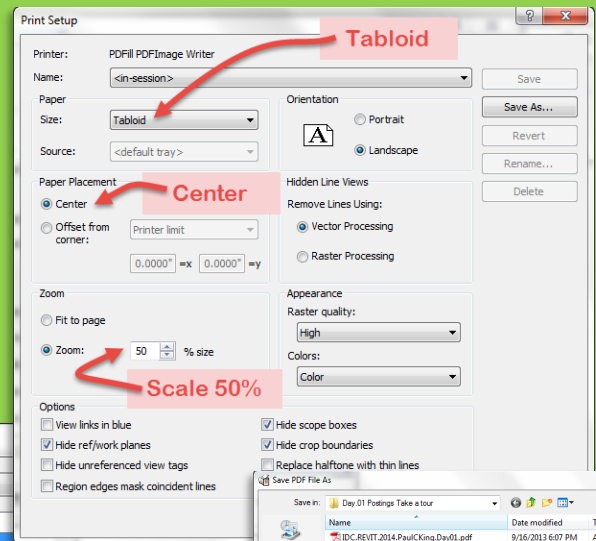
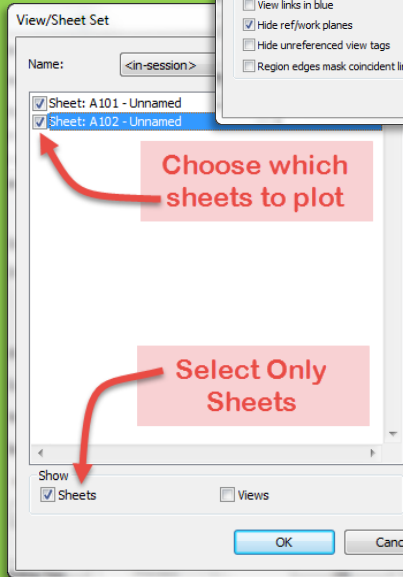
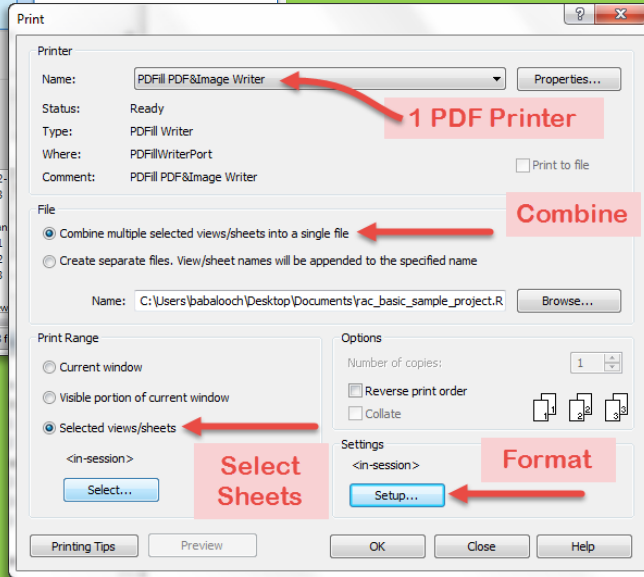
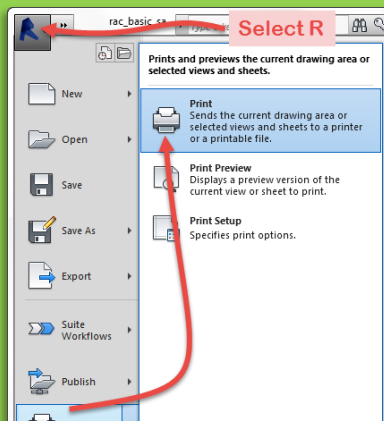
- Ribbons 1 2 3
- Quick Access
- Info Center
- View Control
- - Scale & Detail
- - Visual Styles
- - Sun Path
- - Cropping
- - Visibility Control
- - Hidden Elements

Properties Project Browser Tabbed View

- New Sheet
- Add Views
- Plot to PDF

Building
Technology III

- Print
- Select a PDF Printer
- Select Multiple Sheets
- Combine into single PDF
- 22 x 34 to Tabloid
- Center and Scale to 50%



ARCH 2431. Building Technology III

Building Information Modeling with Revit Day 01

The Revit Interface & Scavenger Hunt



R AUTODESK® REVIT®
DESIGN • CONNECT • OPTIMIZE

The End

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