



New York City College of Technology Division of Continuing Education

Building Information Modeling with Revit 2014

Module 01

Take a Tour & Scavenger Hunt & Orient to View



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http://professorpaulking.wordpress.com/ http://openlab.citytech.cuny.edu/bim101-sp14/

http://students.autodesk.com/

Day 01

Project Tour

- Change Units
- Take a Tour

Project Browser

- Floor Plans
- Ceiling Plans
- 3D Views
- Elevations
- Sections
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Creating Views

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- Duplicate
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- Scope Box

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Scavenger Hunt

Sheet Layout

BIM & Parametrics

Wrap up

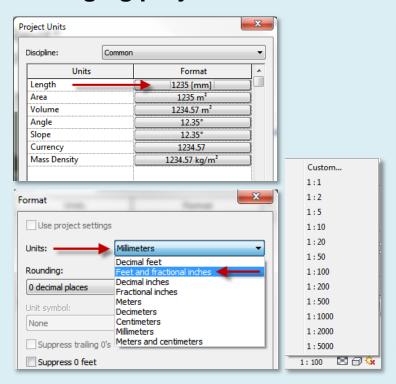
Revit Introduction

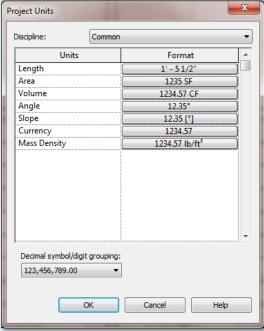
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Manage - Project Units



Changing project units from Metric to English





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"

Custom...

12" = 1'-0" 6" = 1'-0"

3" = 1'-0"

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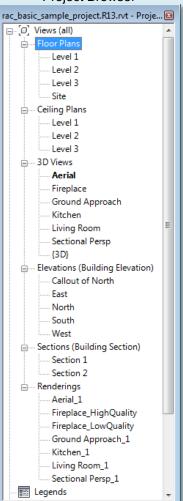
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Project Browser – Floor Plans

Project Browser



- Level 1 & Siteplan
- Scales 1/8 = 1'-0
 - Area Plan with Key

- **Visual Styles**
 - **Hidden Line**



with Shadows

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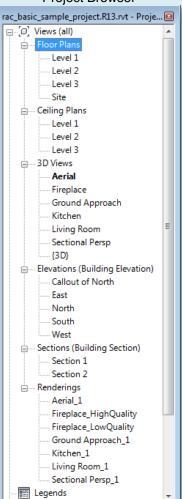
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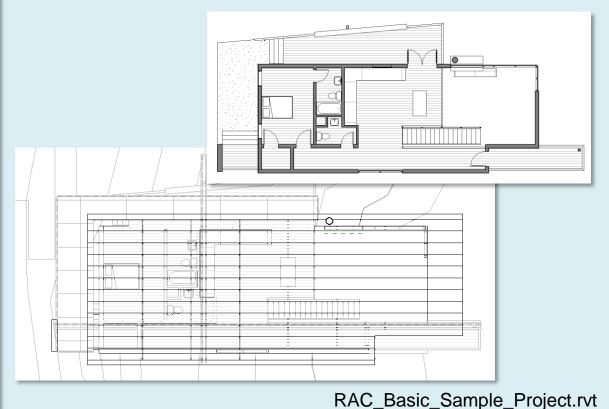
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Project Browser – Floor Plans



- Level 2 & 3 (roof)
- Scales 1/8 = 1'-0

- **Visual Styles**
 - **Hidden Line**



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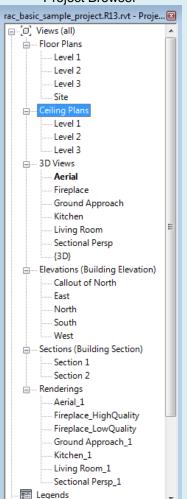
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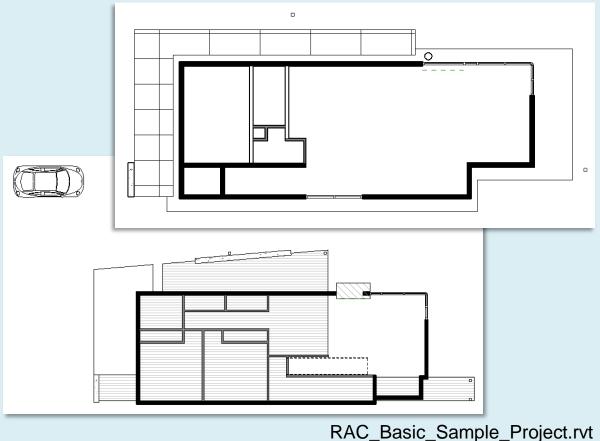
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Project Browser – Ceiling Plans



- Level 1 & 2
- Scales 1/8 = 1'-0

- Visual Styles
 - Hidden Line



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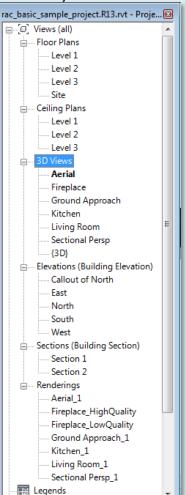
Wrap up

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Project Browser – 3D Views (perspective)

Project Browser



- **Aerial & Ground Approach Perspective Views**
- **Visual Styles**
 - Realistic & Shaded with Edges



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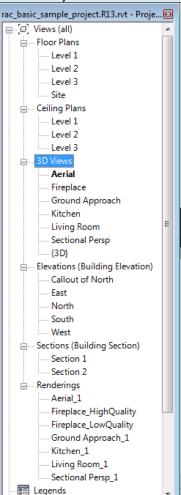
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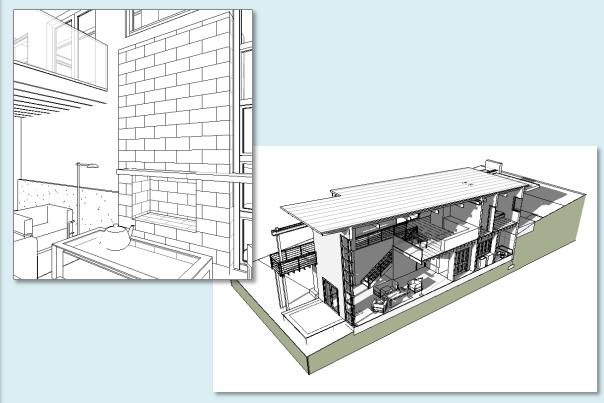
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Project Browser – 3D Views (perspective)

Project Browser



- **Fireplace and Section Perspective Views**
- **Visual Styles**
 - Hidden Line & Hidden Line with Shadows



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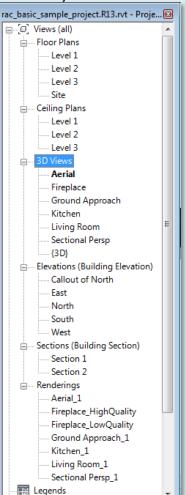
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Project Browser – 3D Views (perspective)

Project Browser



- Fireplace and Kitchen Perspective Views
- Visual Styles
 - Realistic & Shaded with Edges



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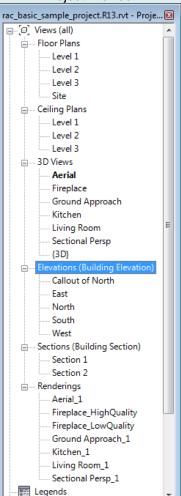
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Project Browser - Elevations (Building Elevations)

Project Browser



- South & North Elevations & Callout of North
- Scales 1/8 = 1'-0", 1/4" = 1'-0" & 1/2" = 1'-0"
- Visual Styles
 - Shaded with Edges & Hidden Line with Shadows



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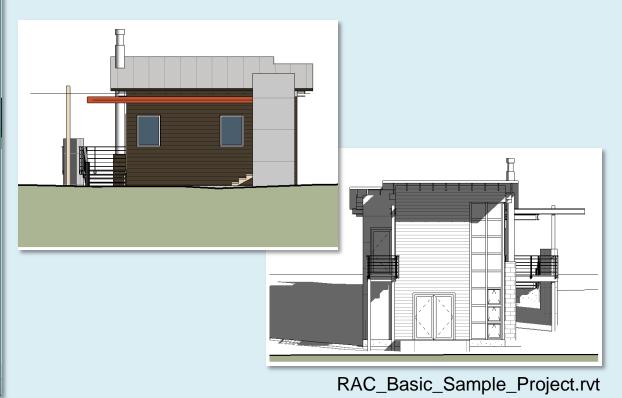
Project Browser – Elevations (Building Elevations)

Project Browser

rac_basic_sample_project.R13.rvt - Proje... □ [□] Views (all) - Floor Plans Level 1 Level 2 Level 3 Site - Ceiling Plans ... Level 1 Level 2 Level 3 i → 3D Views Aerial Fireplace Ground Approach Kitchen Living Room Sectional Persp {3D} levations (Building Elevation Callout of North East North South West - Sections (Building Section) Section 1 Section 2 - Renderings Aerial 1 Fireplace HighQuality Fireplace_LowQuality Ground Approach_1 Kitchen_1 Living Room_1 Sectional Persp 1

📰 Legends

- **East & West Elevations**
- Scale 1/8 = 1'-0"
- **Visual Styles**
 - **Shaded with Edges & Hidden Line with Shadows**



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BIM & Parametrics

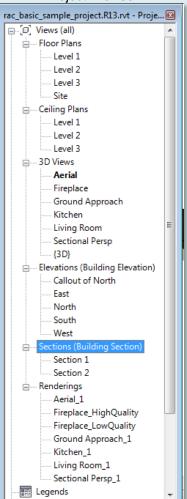
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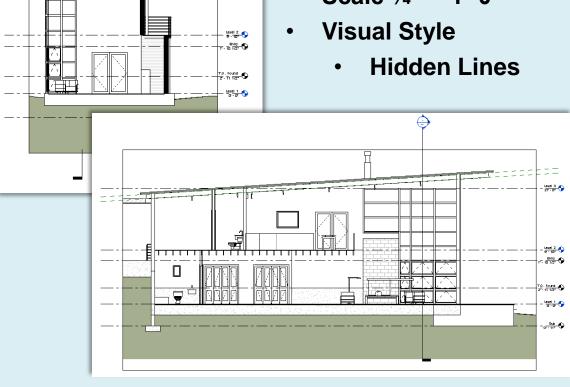
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Project Browser – Sections (Building Sections)

Project Browser



- Levels
 - Section Markers
 - Scale ¼" = 1'-0"



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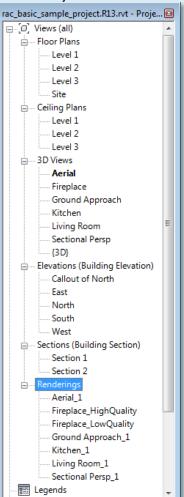
BIM & Parametrics

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Revit Introduction

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Project Browser – Renderings (raster images)



- **Section Perspective**
- **Ground Approach**



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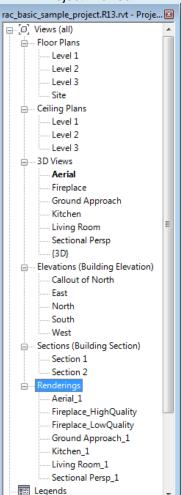
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Project Browser – Renderings (raster images)



- Realistic Renderings of the Fireplace
 - High Quality (brighter image)
 - Low Quality



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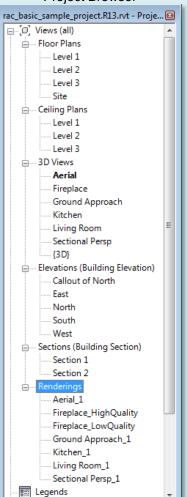
BIM & Parametrics

Wrap up

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Project Browser – Renderings (raster images)



- Kitchen on upper level
- Living Room below



RAC_Basic_Sample_Project.rvt

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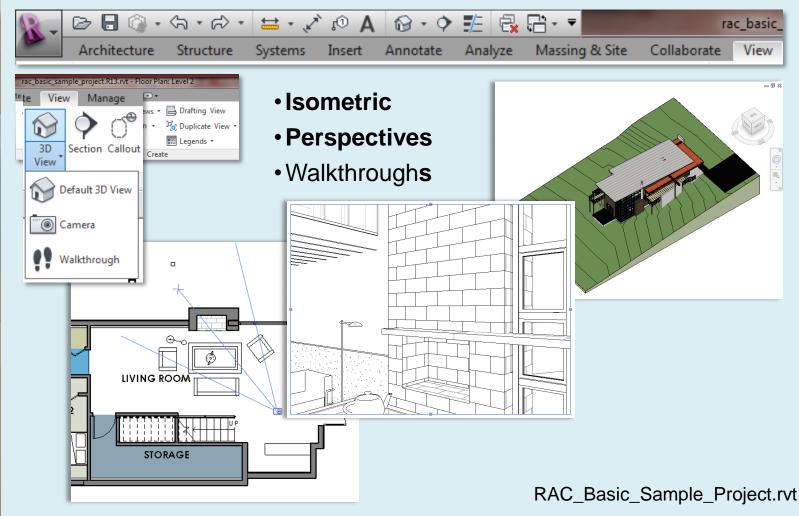
BIM & Parametrics

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Creating New Views – 3D



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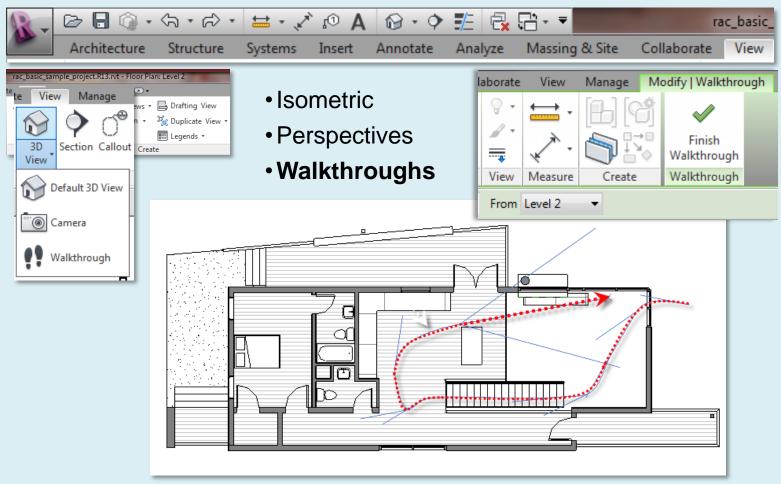
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Creating New Views – 3D

Quick Access Toolbar



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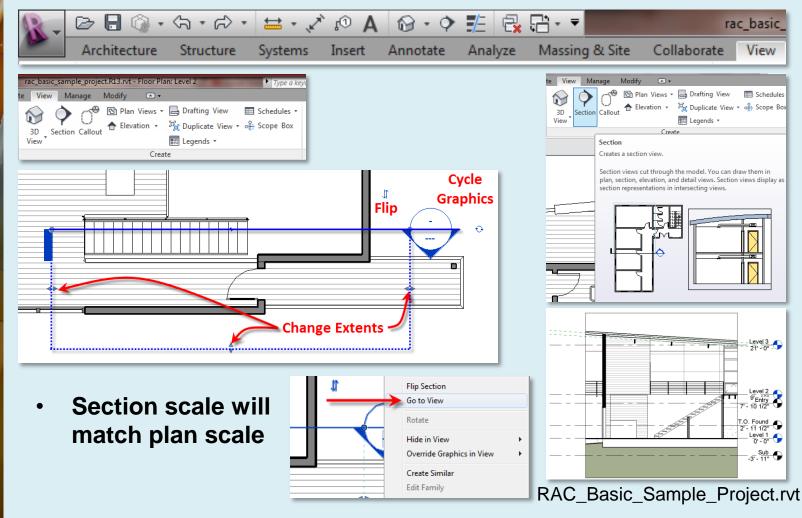
BIM & Parametrics

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Creating New Views - Section



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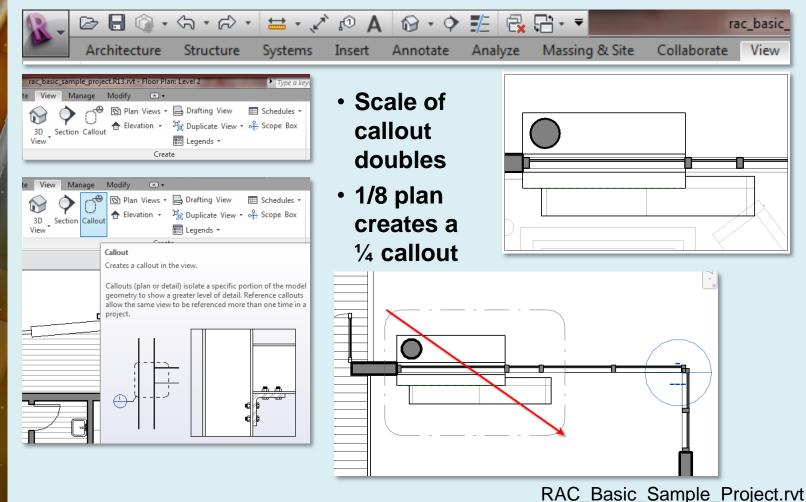
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Creating New Views - Callouts



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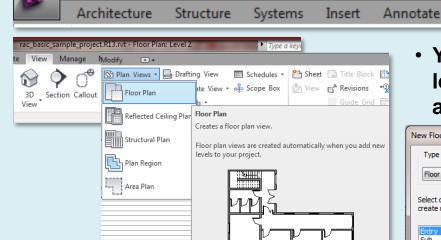
Wrap up

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Creating New Views – Plan Views

Proiect Browser



- Floor plans
- Reflected ceiling plans
- Structural plans
- **Region plans**
- Area plans

 You can only create a plan for any level that does not yet have an associated plan view

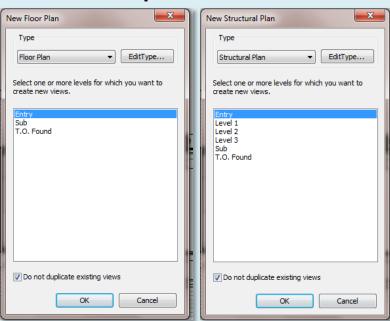
Massing & Site

Analyze

rac basic

View

Collaborate



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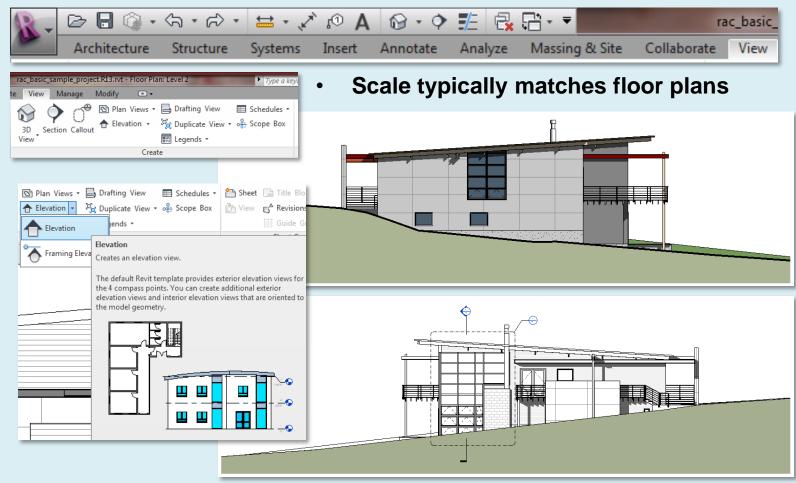
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Creating New Views - Elevation

Project Browser



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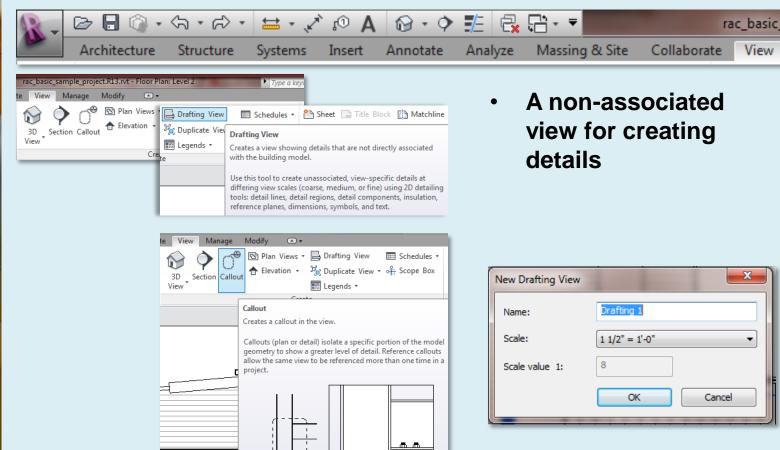
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Creating New Views – Drafting Views

Quick Access Toolbar



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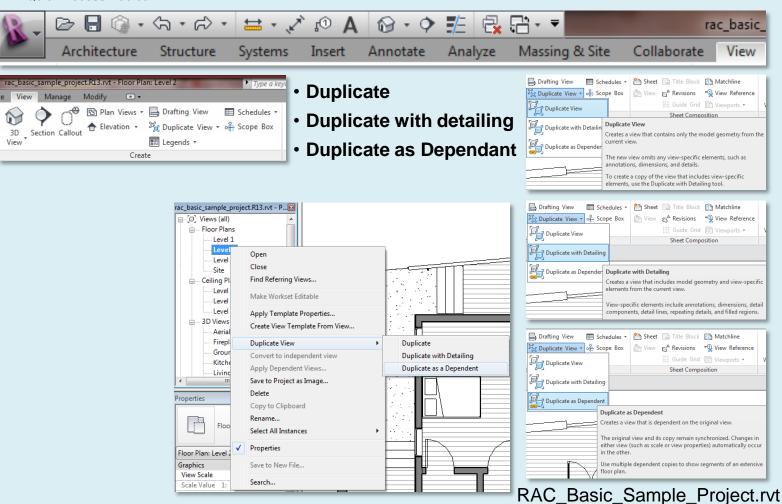
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Creating New Views - Duplicate



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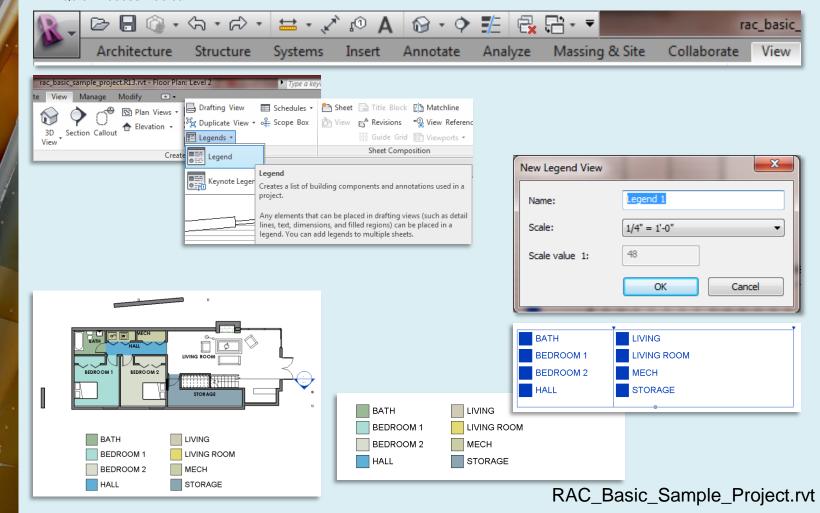
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Creating New Views - Legends



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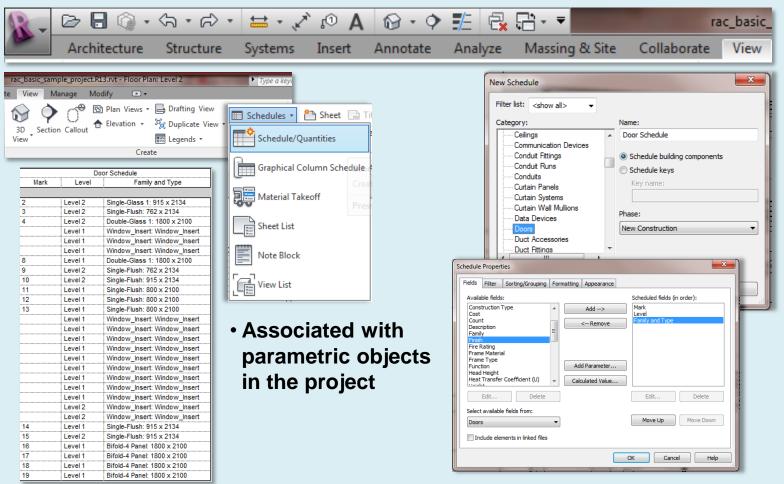
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Creating New Views - Schedules

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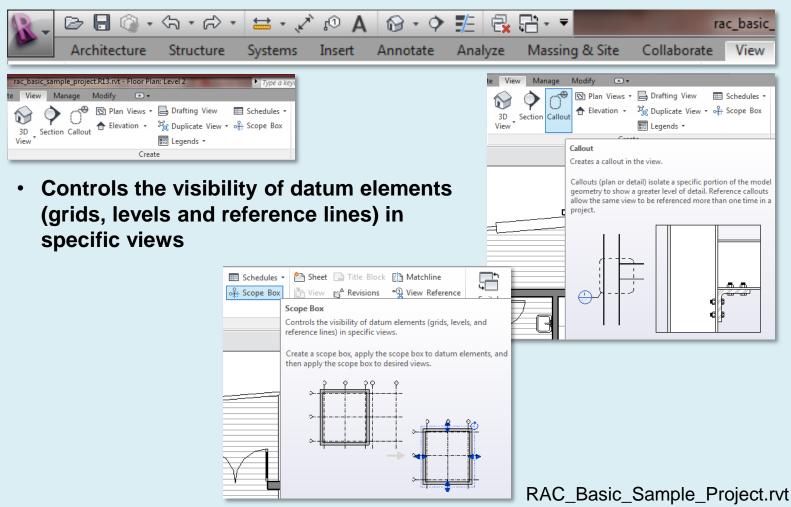
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Creating New Views – Scope Box



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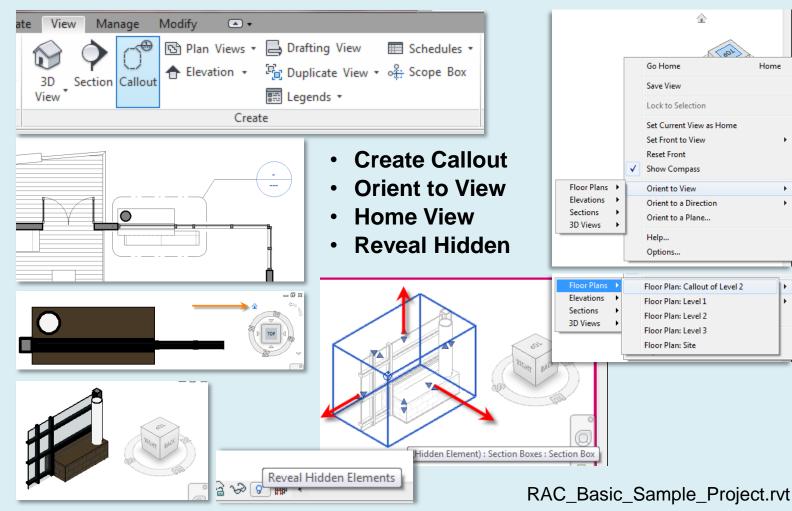
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Scavenger Hunt

RAC_Basic_Sample_Project.rvt



To describe the sample model identify and create as many unique views as you can find. (the scavenger hunt)

Group related views and place them on a sheet at the appropriate scale. A unique view is one that adds to the story and is not redundant.

Student Learning Objectives:

Upon successful completion of this assignment, the student will:

- Correctly Name a Revit File according to class standards
- •"Tell a Story" through drawings by selecting appropriate views of a Revit Model.
- •Logically group together related views and format these on a sheet in Revit.
- •Understand the appropriate scale for various drawing types.

Assessment:

To evaluate the student's achievement of the learning objectives, the professor will do the following:

- •Evaluate the file for proper naming convention.
- •Evaluate the number of stories told by the student.
- •Evaluate the quality and completeness of the story told by the student.
- •Evaluate the quality and formatting of view laid out on sheets in Revit.
- •Evaluate the appropriate use of scale.
- Assess assignment for deadline submission / lateness
- •Commend the student for initiative beyond the given the assignment.

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Scavenger Hunt

Sheet Layout

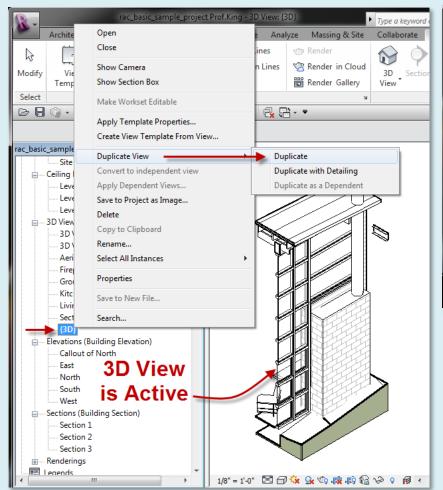
BIM & Parametrics

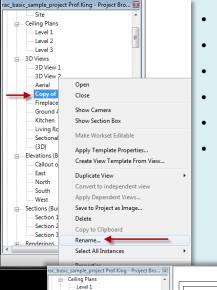
Wrap up

Revit Introduction

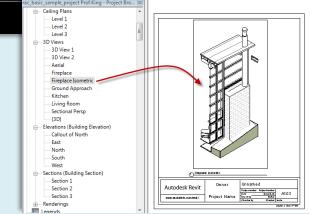
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Orient to View: Duplicate 3D view





- **Default 3D View**
- Orient to View
- Duplicate View
- Set Bounding Box
- Set Scale
- Place on Sheet



RAC_Basic_Sample_Project.rvt

Day 01

Project Tour

- Change Units
- Take a Tour

Project Browser

- Floor Plans
- Ceiling Plans
- 3D Views
- Elevations
- Sections
- Renderings

Creating Views

- 3D Views
- Section
- Callout
- Plan Views
- Elevation
- Drafting view
- Duplicate
- Legends
- Schedules
- Scope Box

Orient to View

Scavenger Hunt

Sheet Layout

BIM & Parametrics

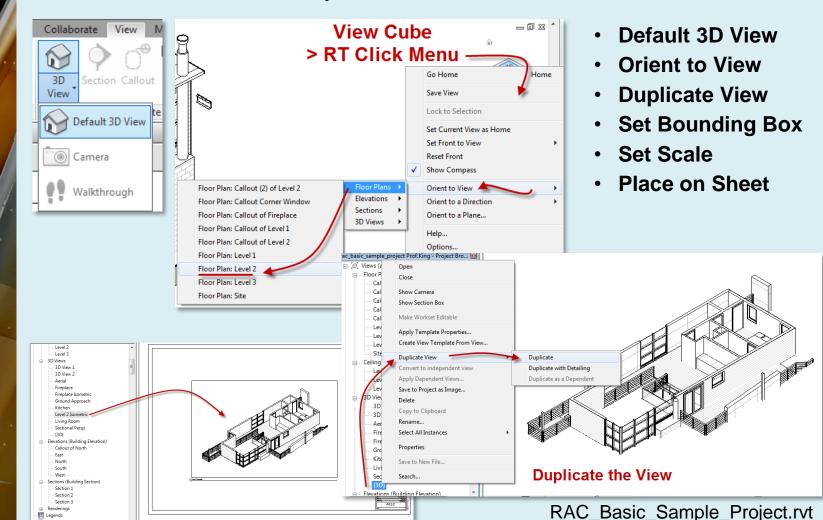
Wrap up

Revit Introduction

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E Legends

Orient to View: Duplicate 3D view



Day 01

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Orient to View

Scavenger Hunt

Sheet Layout

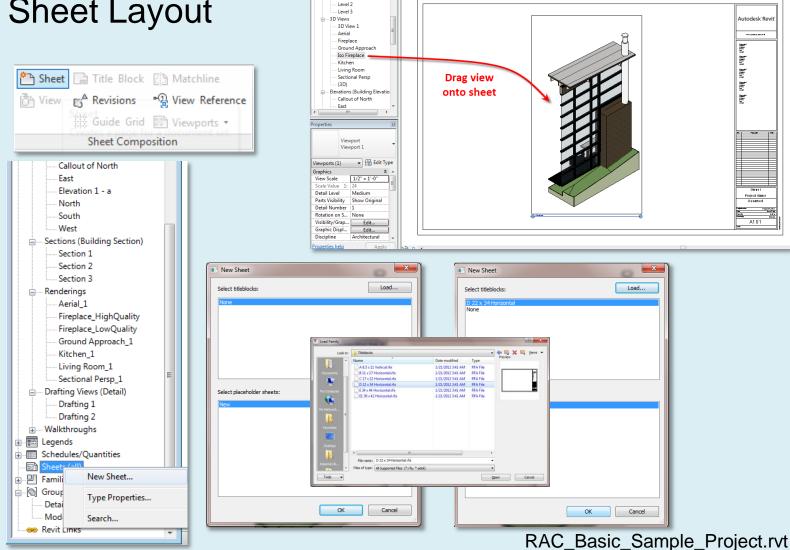
BIM & Parametrics

Wrap up

Revit Introduction

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Sheet Layout



Modify | Viewports Rotation on Sheet: None

rac_basic_sample_project.R13.rvt - P... 8

Day 01

Project Tour

- Change Units
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Project Browser

- Floor Plans
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- 3D Views
- Elevations
- Sections
- Renderings

Creating Views

- 3D Views
- Section
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- Elevation
- Drafting view
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- Schedules
- Scope Box

Orient to View

Scavenger Hunt

Sheet Layout

BIM & Parametrics

Wrap up

Revit Introduction

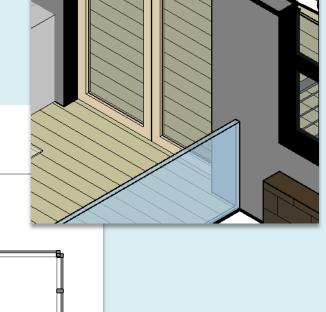
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Building Information Modeling (BIM) & Parametrics

Quick Access Toolbar

Door Schedule		
Mark	Level	Family and Type
	Level 2	Window_Insert: Window_Insert
	Level 2	Window_Insert: Window_Insert
2	Level 2	Single-Glass 1: 915 x 2134
3	Level 2	Single-Flush: 762 x 2134
4	Level 2	Double-Glass 1: 1800 x 2100
9	Level 2	Single-Flush: 762 x 2134
10	Level 2	Single-Flush: 915 x 2134
15	Level 2	Single-Flush: 915 x 2134

3d view, plan view and schedule view of the same door



Day 01

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Creating Views

- 3D Views
- Section
- CalloutPlan Views
- Elevation
- Drafting view
- Duplicate
- Legends
- LegendsSchedules
- Scope Box

Orient to View

Scavenger Hunt

Sheet Layout

BIM & Parametrics

Wrap up

Revit Introduction

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Day 1 – Wrap up

- Units 1 = 1 foot
- Project Browser
- Object Properties
- Views
- Sheets
- Families
- Groups
- ZE = zoom extents
- Visual Styles
- Vocabulary terms

- Parametric
- Building Information Modeling
- Homework
 - Submit 1 completed scavenger hunt sheet to be emailed as a pdf by Friday at 6pm.
 - Prof.Paul.King@Gmail.com
 - File must include course name, assignment description and your full name R1.Scavenger.First.Last.pdf