Tips and Tricks to Make Your Autodesk® Revit® Drawings and Presentations Look Great!

AB 1416

Steven C. Shell
Architect

Autodesk University

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Class Summary

AB 1416

- This class will show you how to get the most out of the powerful graphic features in Autodesk® Revit® 2013 and learn valuable visualization techniques to make your drawings look beautiful and communicate better.

- This class will benefit all AEC professionals using Revit who care how their drawings look and communicate.

- Introduce you to some ideas which you may have not thought of which will inspire you to explore and try new methods and techniques of your own which you can then share with us next year.

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Learning Objectives

At the end of this class, you will be able to:

- Utilize techniques to make your construction documents communicate better
- Take full advantage of Revit's powerful advanced graphic tools and capabilities
- Use a variety of presentation techniques to help develop your own artistic style
- Create beautiful renderings out of the box more quickly and better than ever

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Section 1

Basic Graphic Communication Techniques

Project Wide Default Settings to Individual Overrides

Steven C. Shell
Architect

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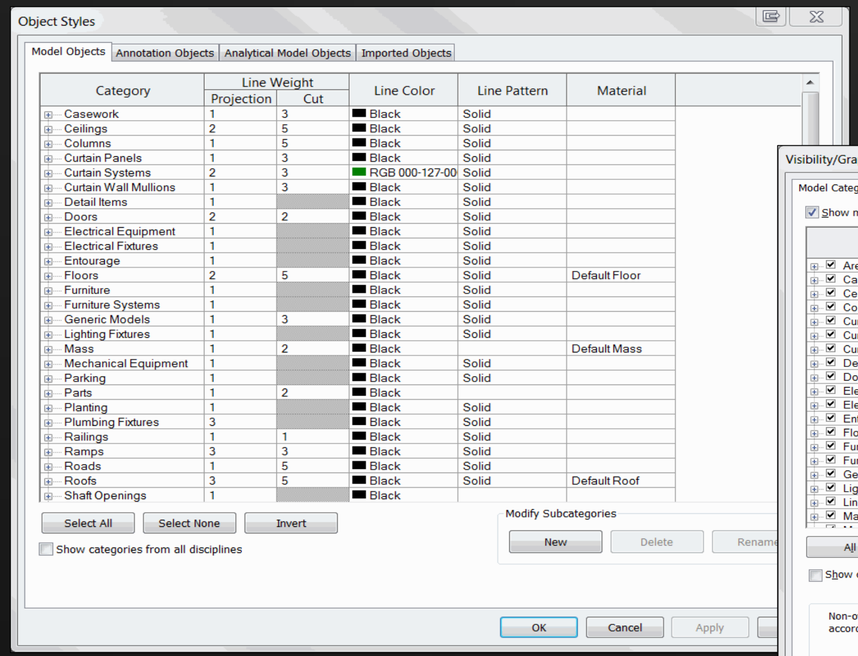
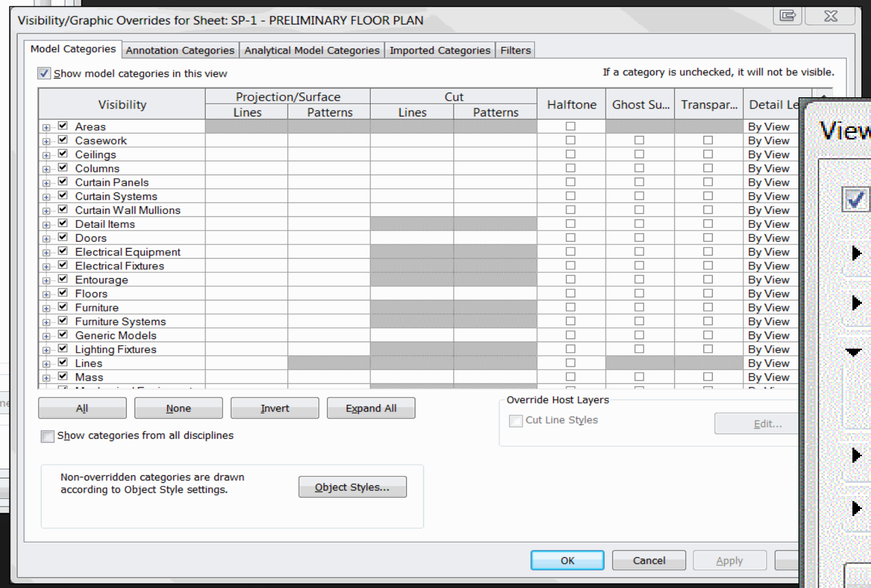
Object Styles

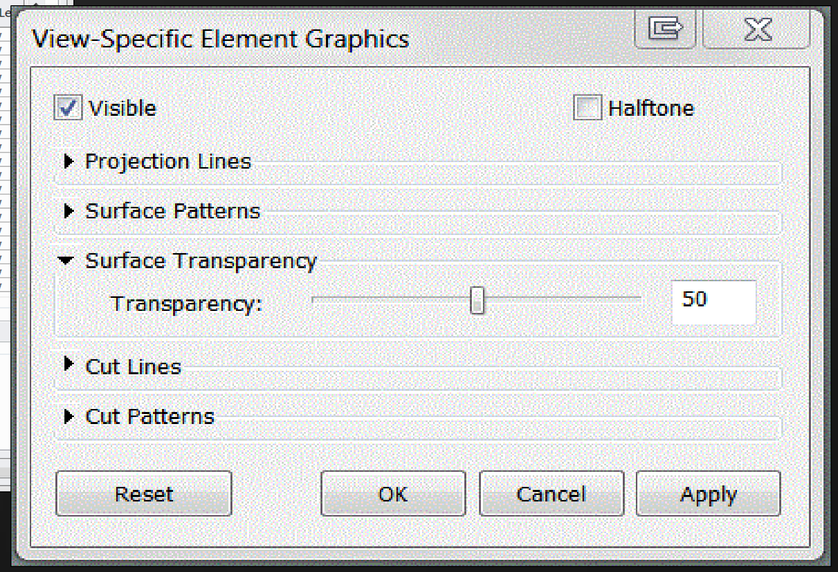
Project Wide to Individual Settings



Project Wide – Default Template



View Specific Category Override



Individual Element Override

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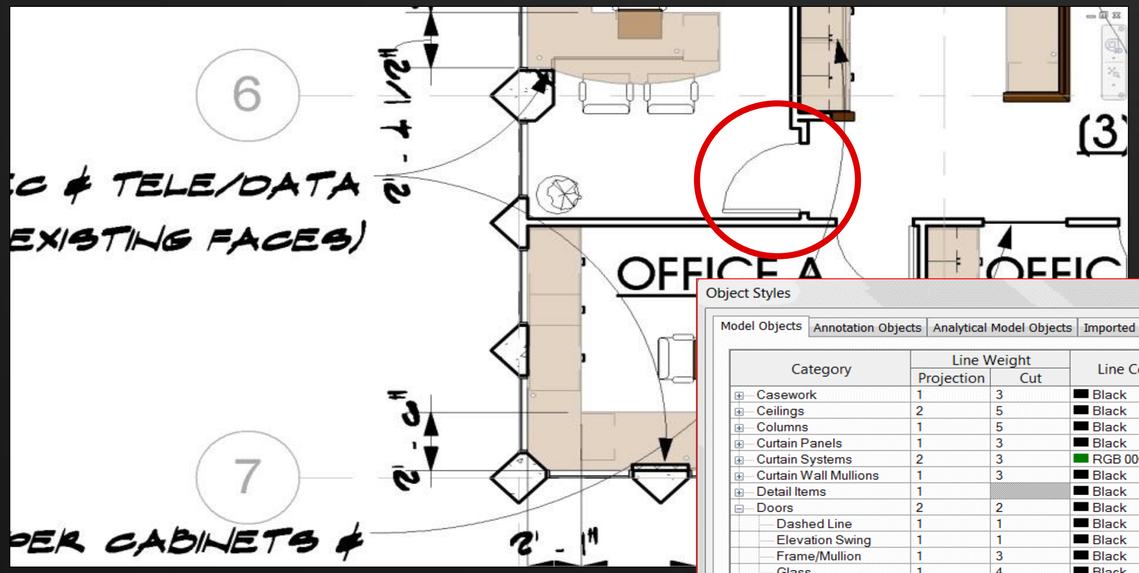
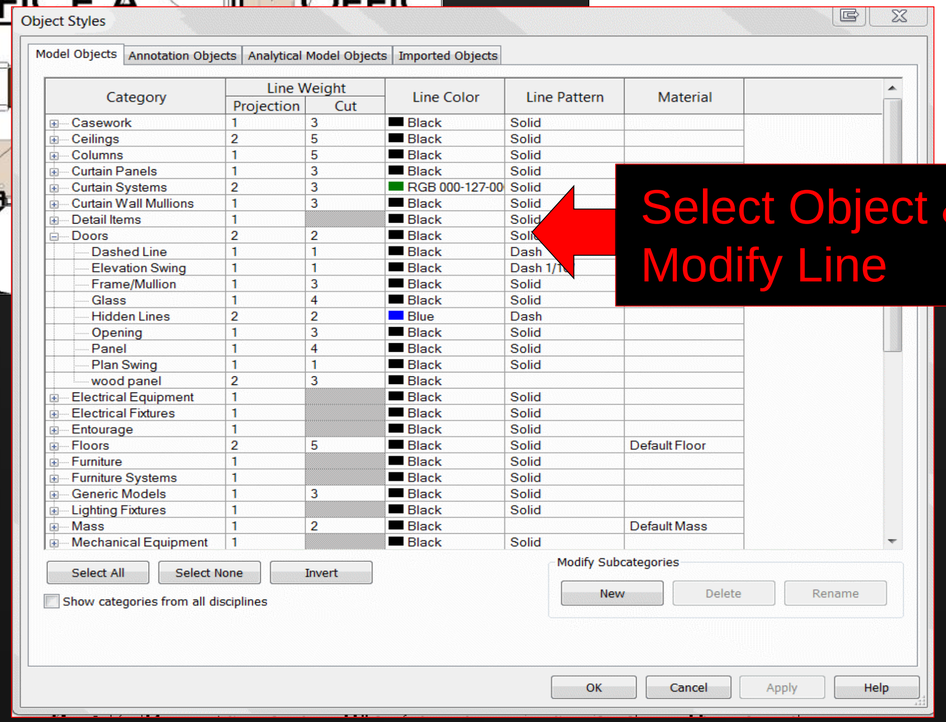
Object Styles

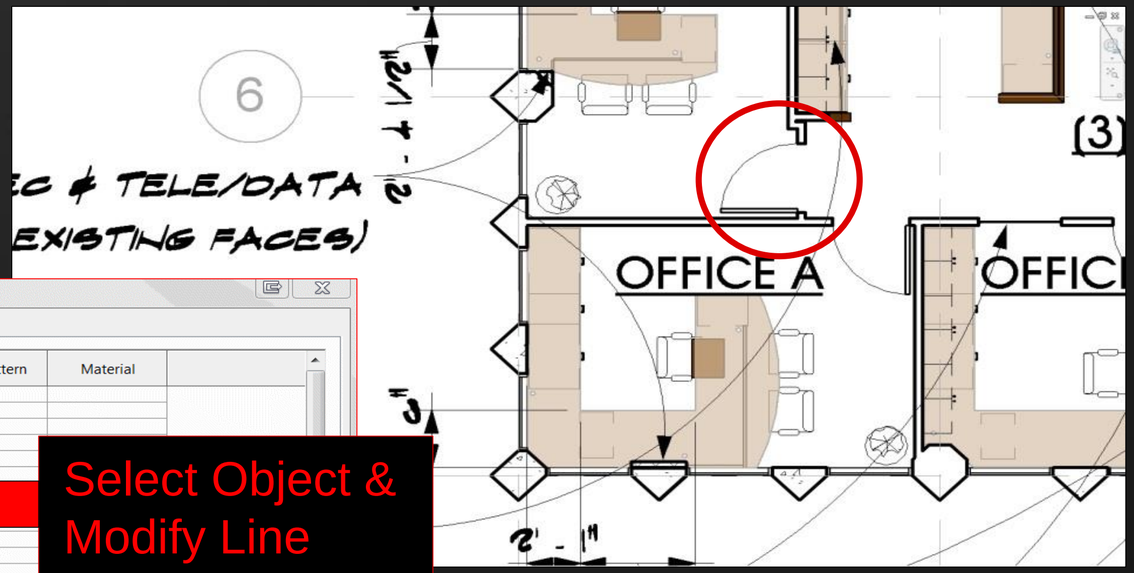
Project Wide – Line Styles



Door Panel – Original Line Weight (When Cut in View)



Select Object & Modify Line



Door Panel – Thicker Line Weight (When Cut in View)

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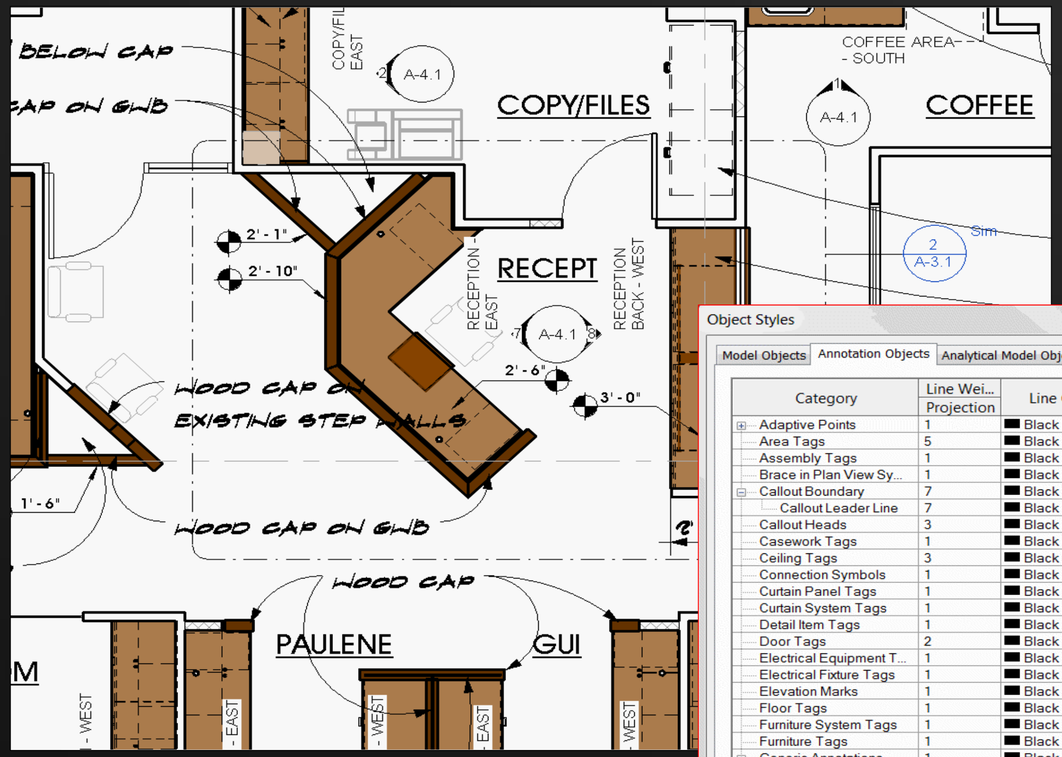
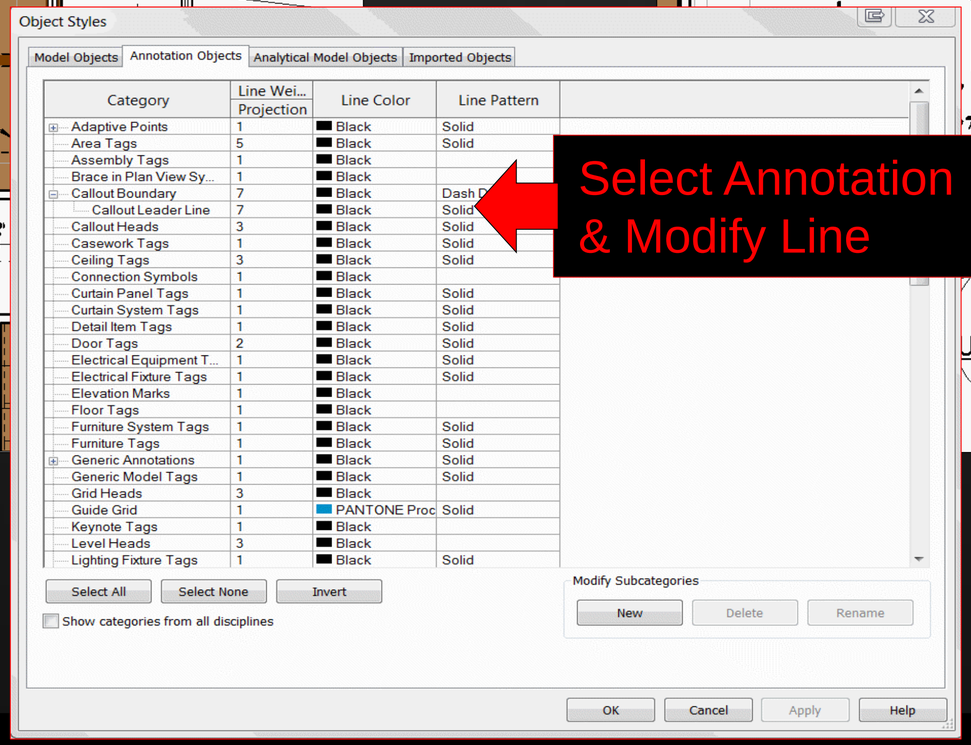
Object Styles

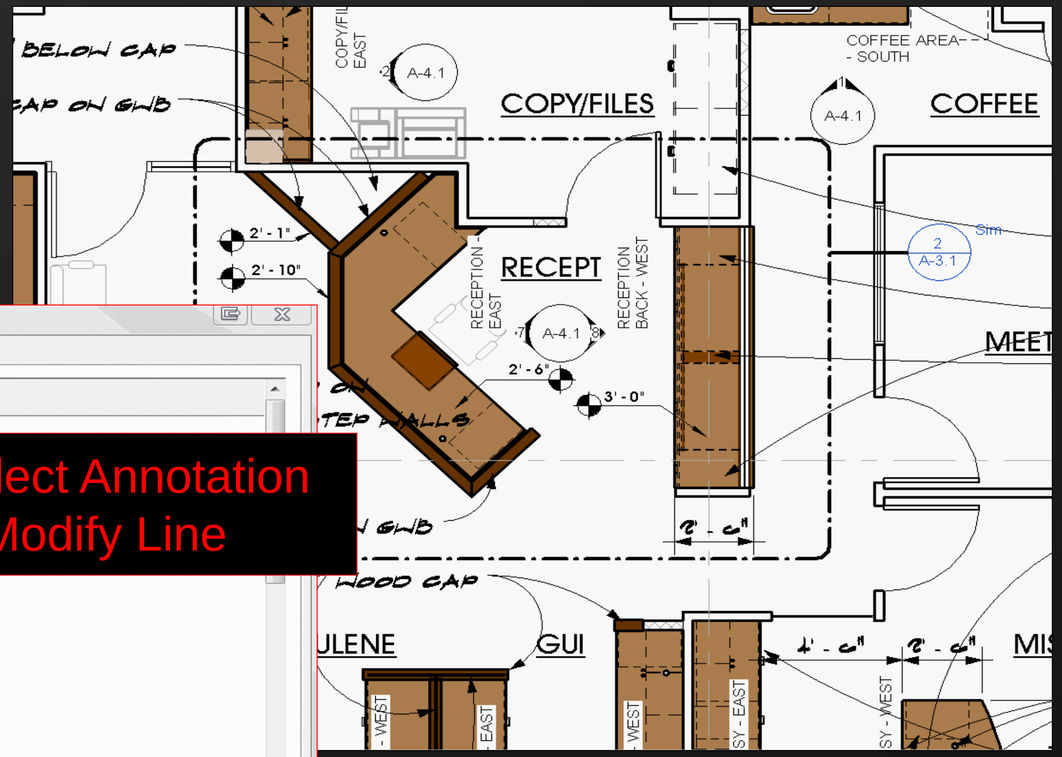
Project Wide - Annotation Objects



Detail Callout
Original Line Weight



Select Annotation & Modify Line



Detail Callout
Modified Bold Line Weight

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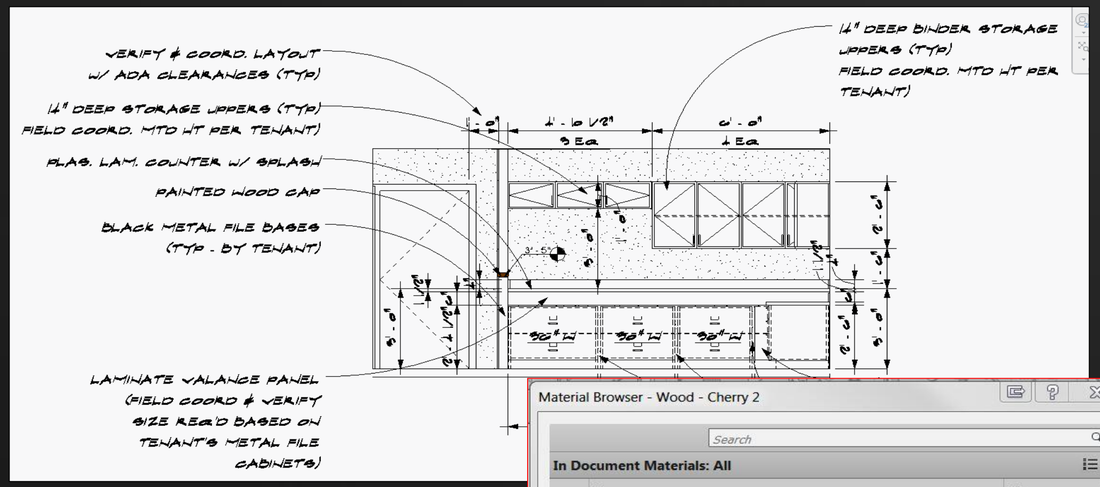
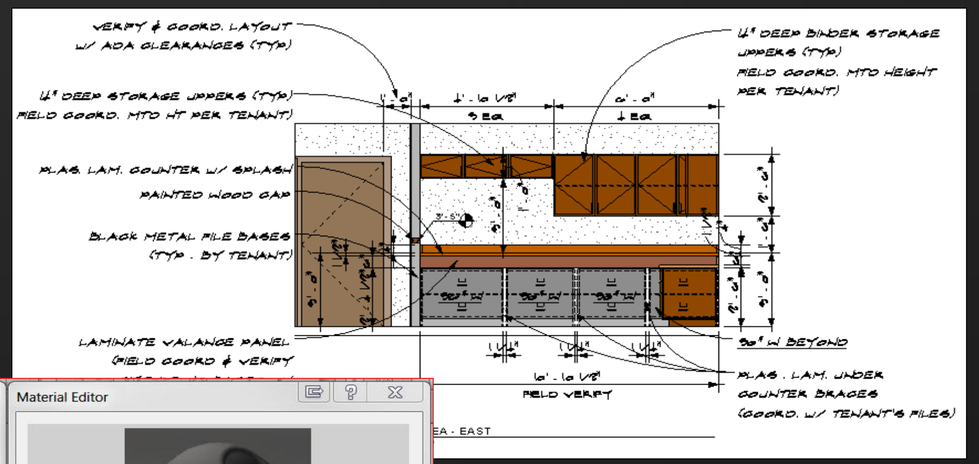
Object Styles

Project Wide - Material Settings

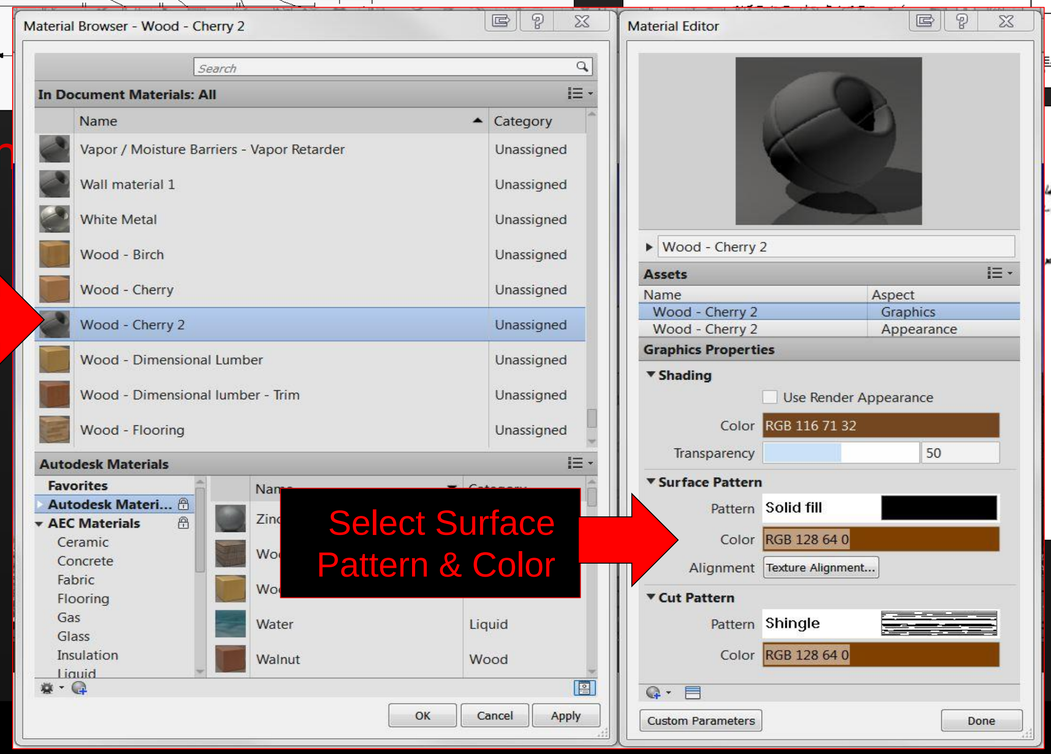


Original "Default" Hidden Line Elevation

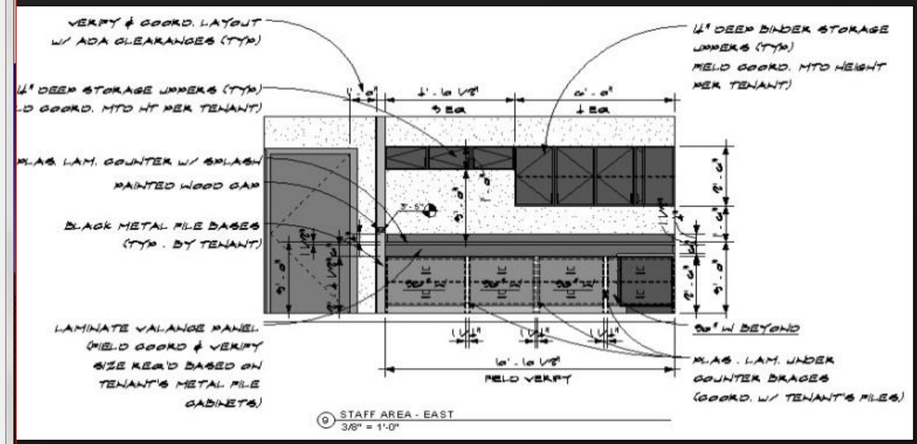


New Hidden Line Elevation

Duplicate Most Similar Material



Select Surface Pattern & Color



Printed Hidden Line Elevation

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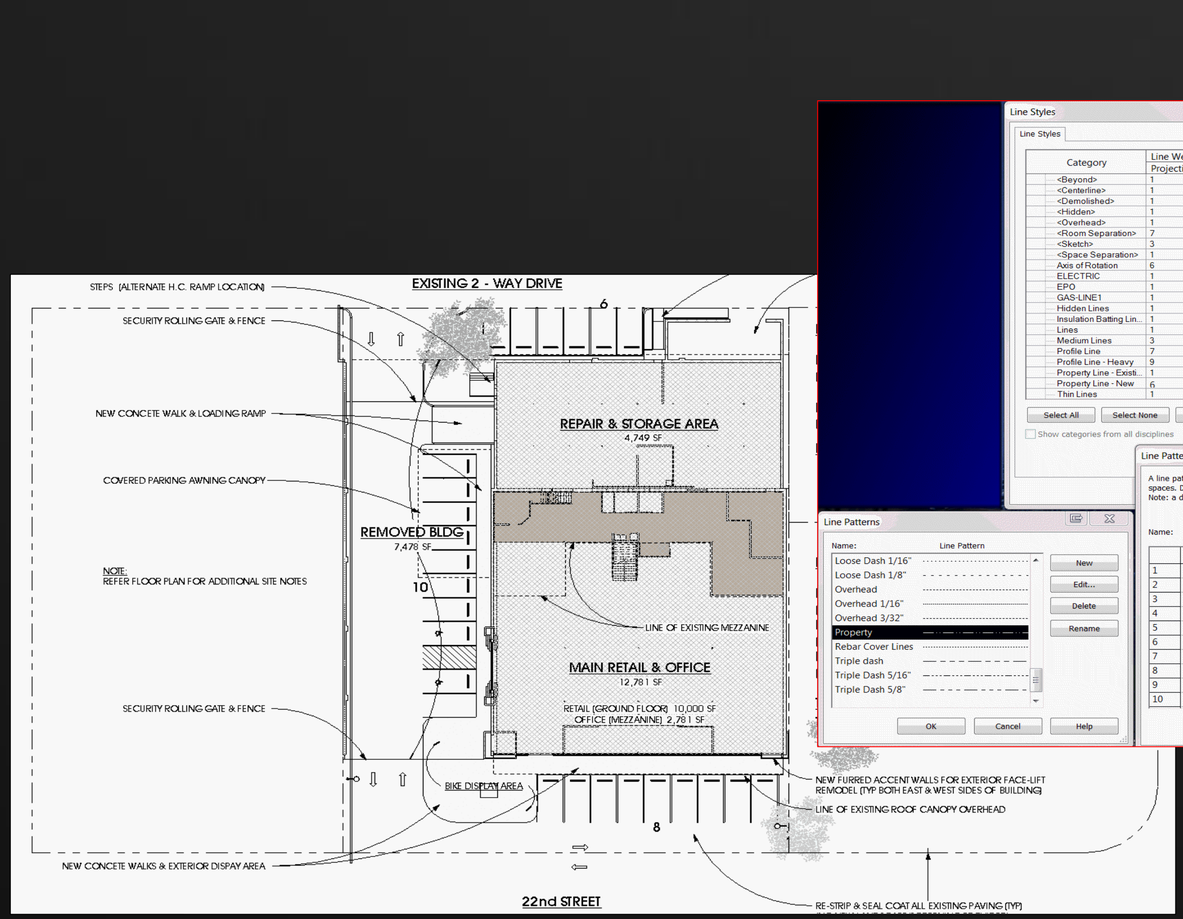
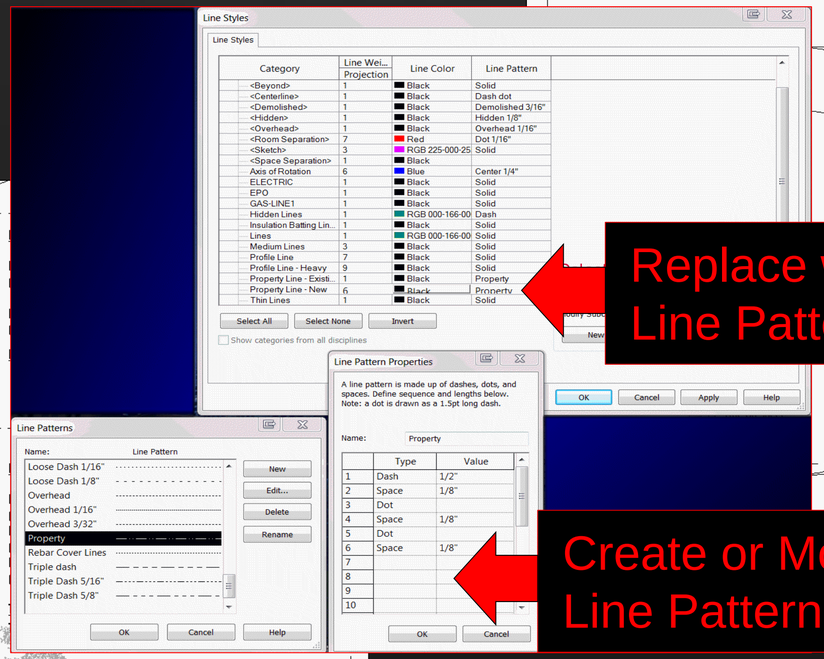
Object Styles

Project Wide – Line Styles

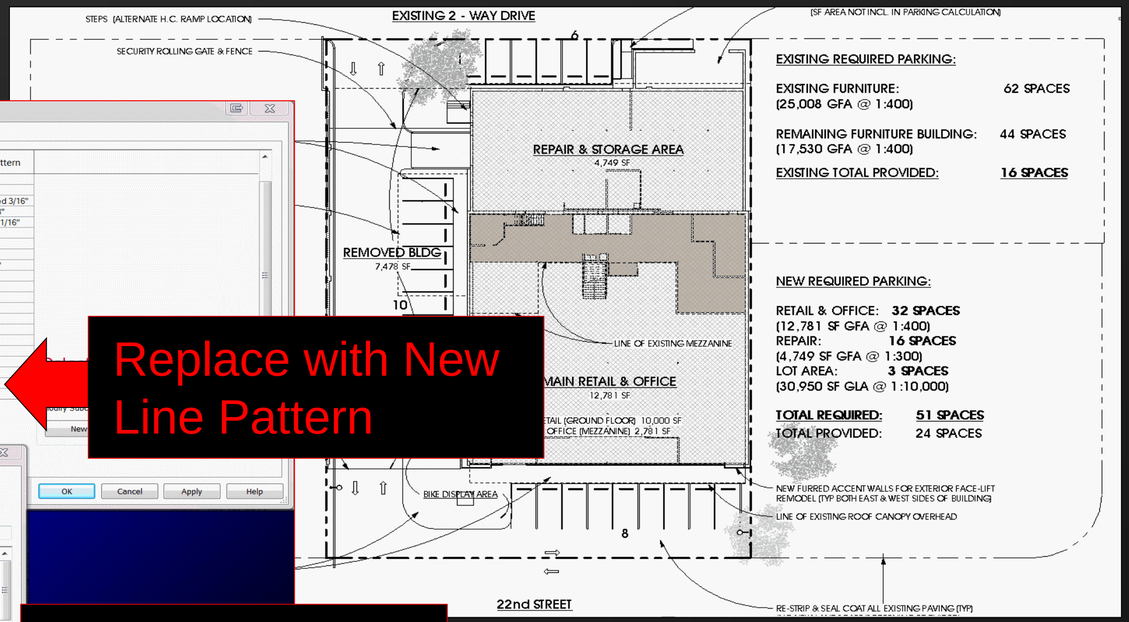
New Modified Property Lines





Replace with New Line Pattern

Create or Modify Line Pattern



Original “Default” Property Lines

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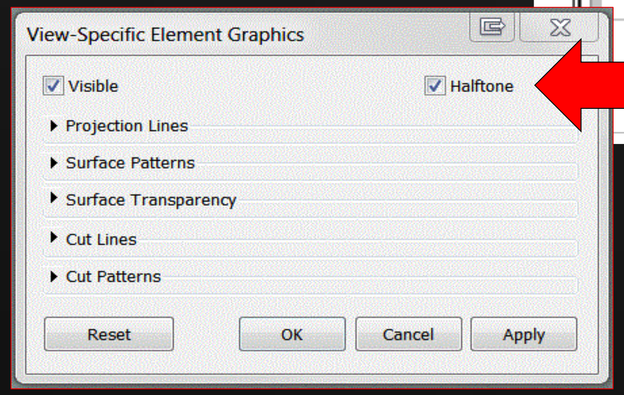
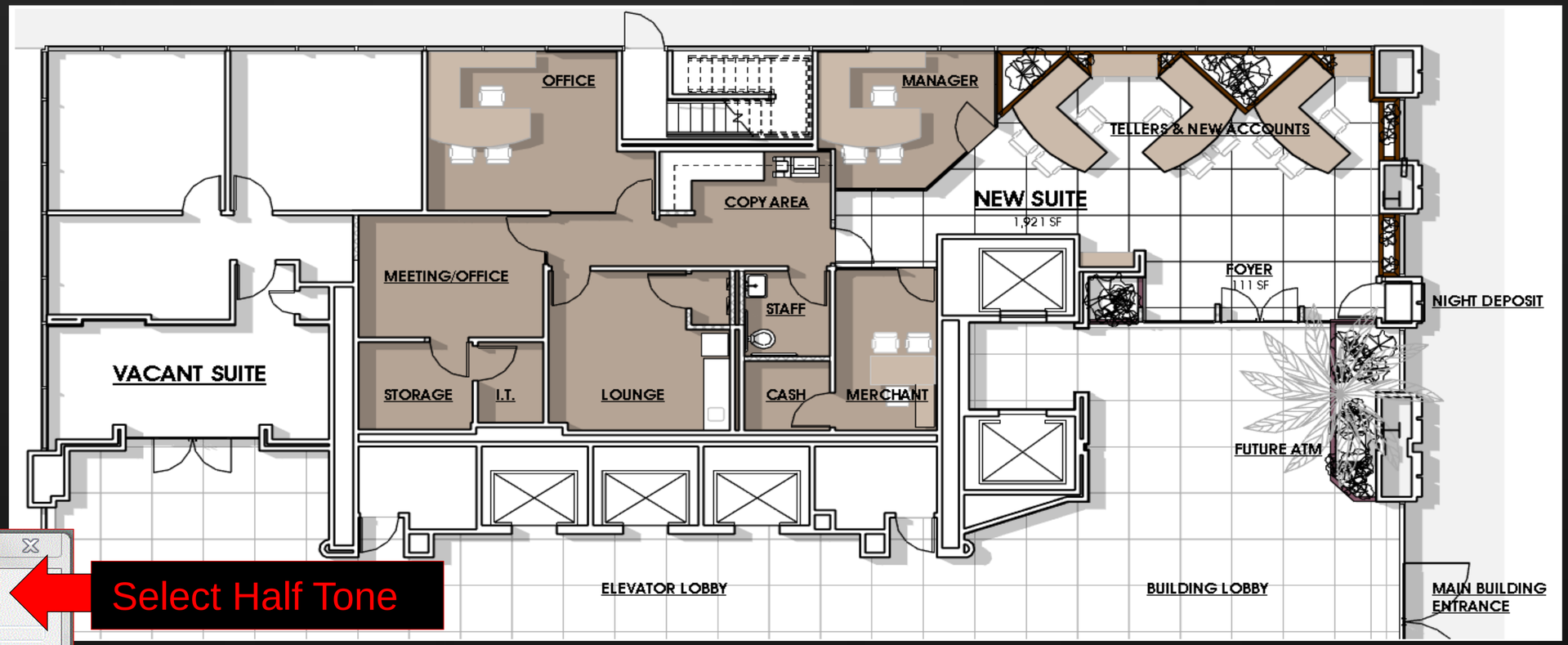
Object Styles

View Specific Overrides (Show New vs Existing)

Use ‘Half Tone’ setting to Override Surface Patterns for Existing Floor Tile



Select Half Tone



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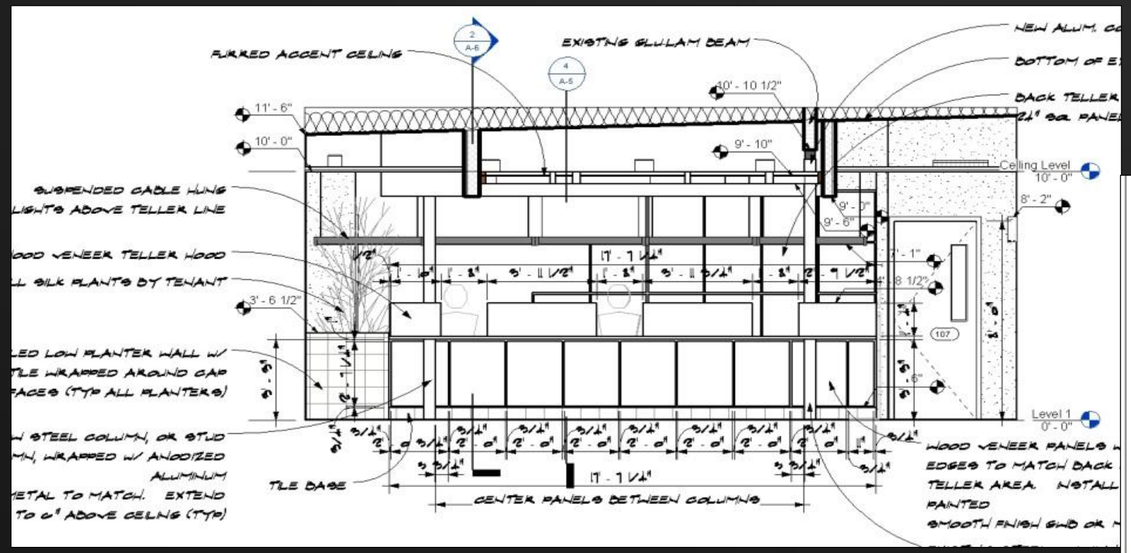
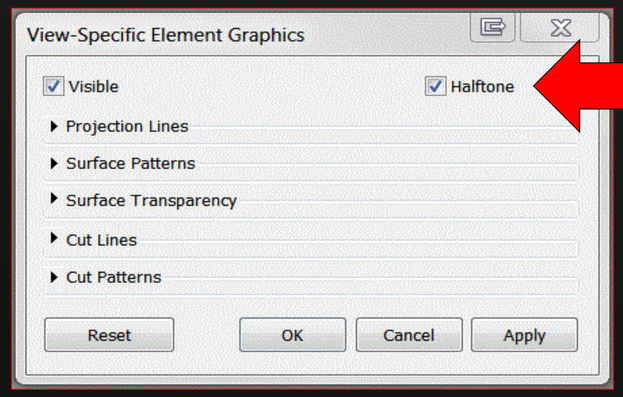
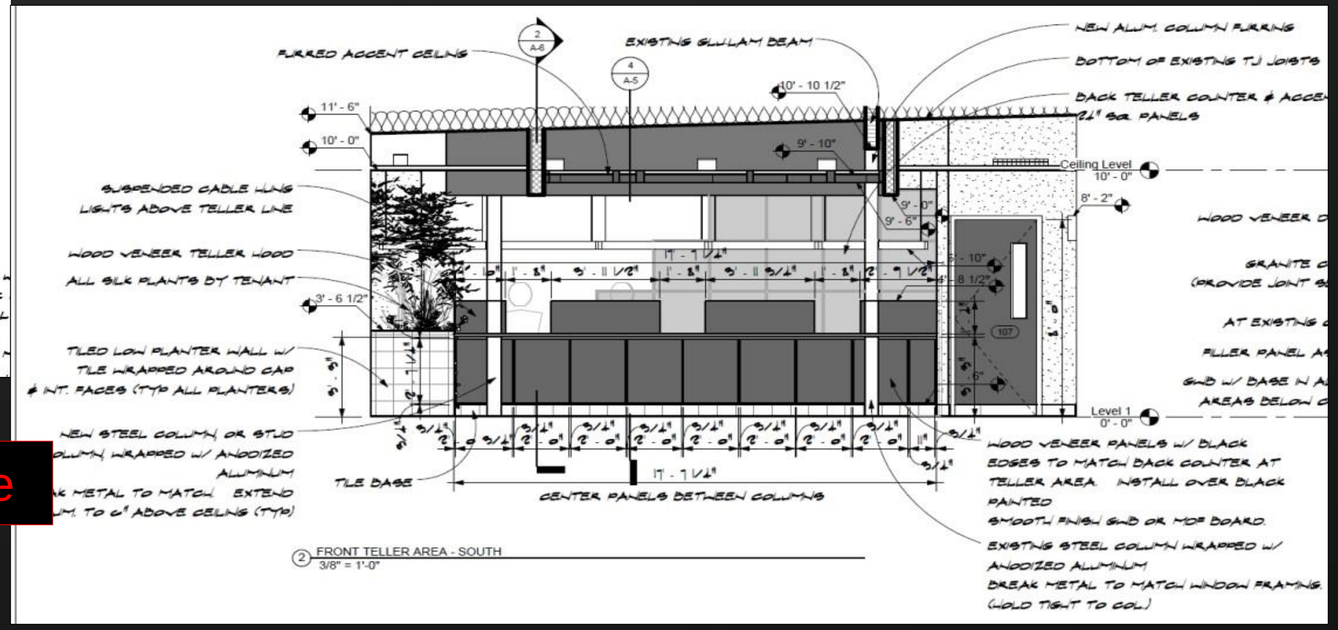
Object Styles

View Specific Overrides (Show Depth)





Select Half Tone



Use ‘Half Tone’ setting to Override Surface Patterns for 3D Layering to Create Depth

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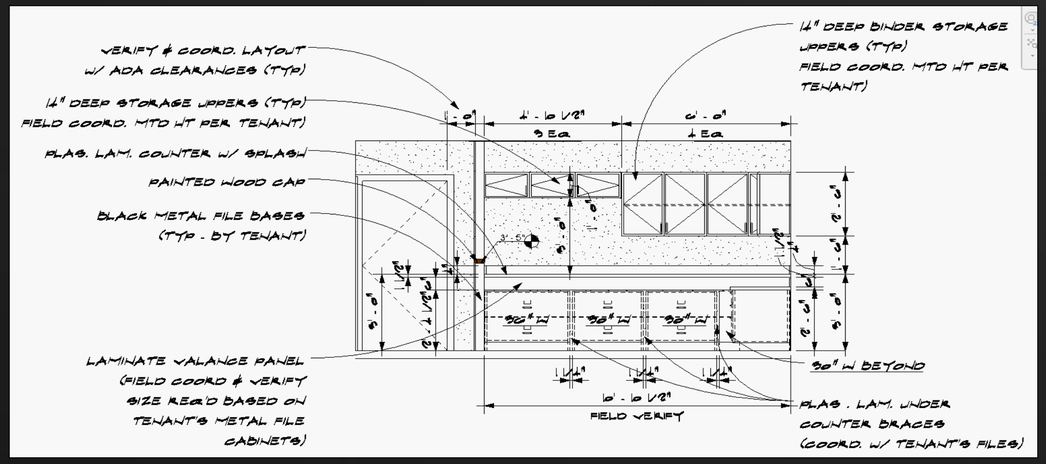
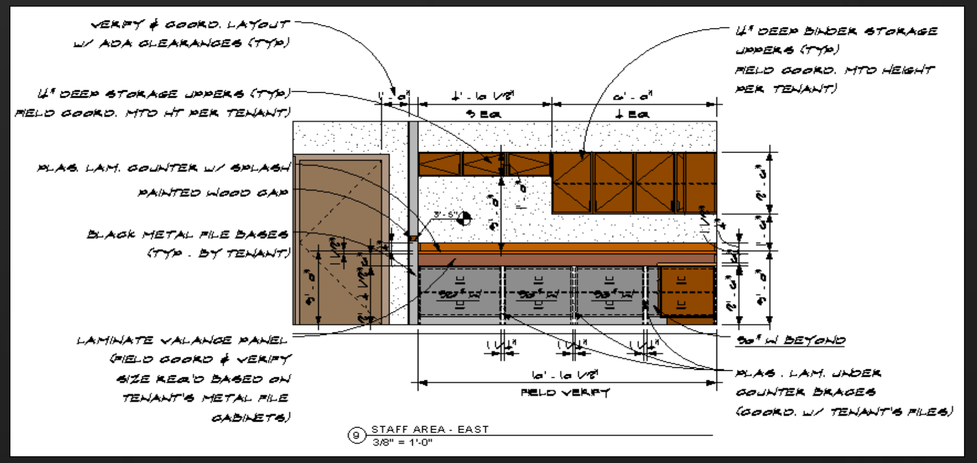
Object Styles

View Specific Overrides (Materials)

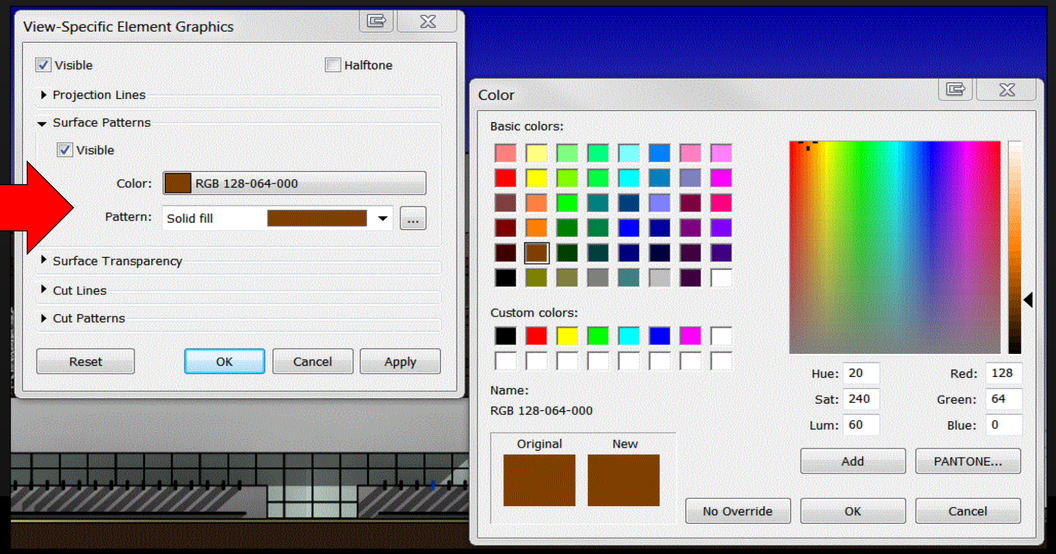


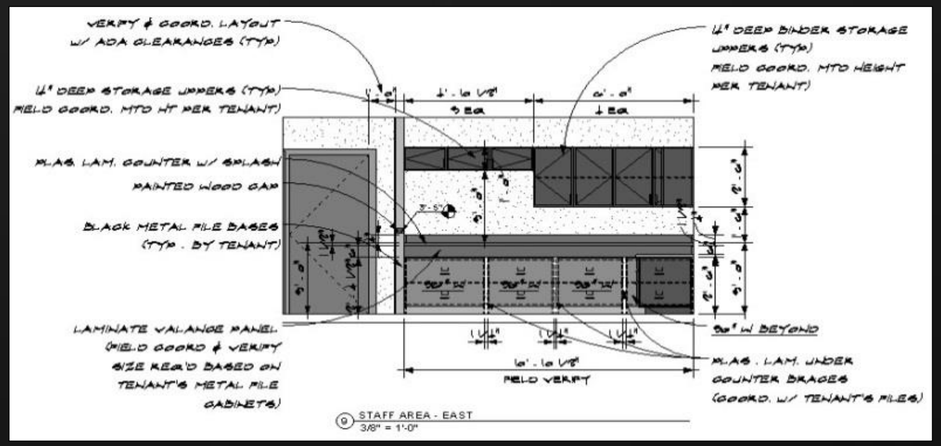
Original "Default" Hidden Line Elevation



New Hidden Line Elevation

Select Surface Pattern & Color





Printed Hidden Line Elevation

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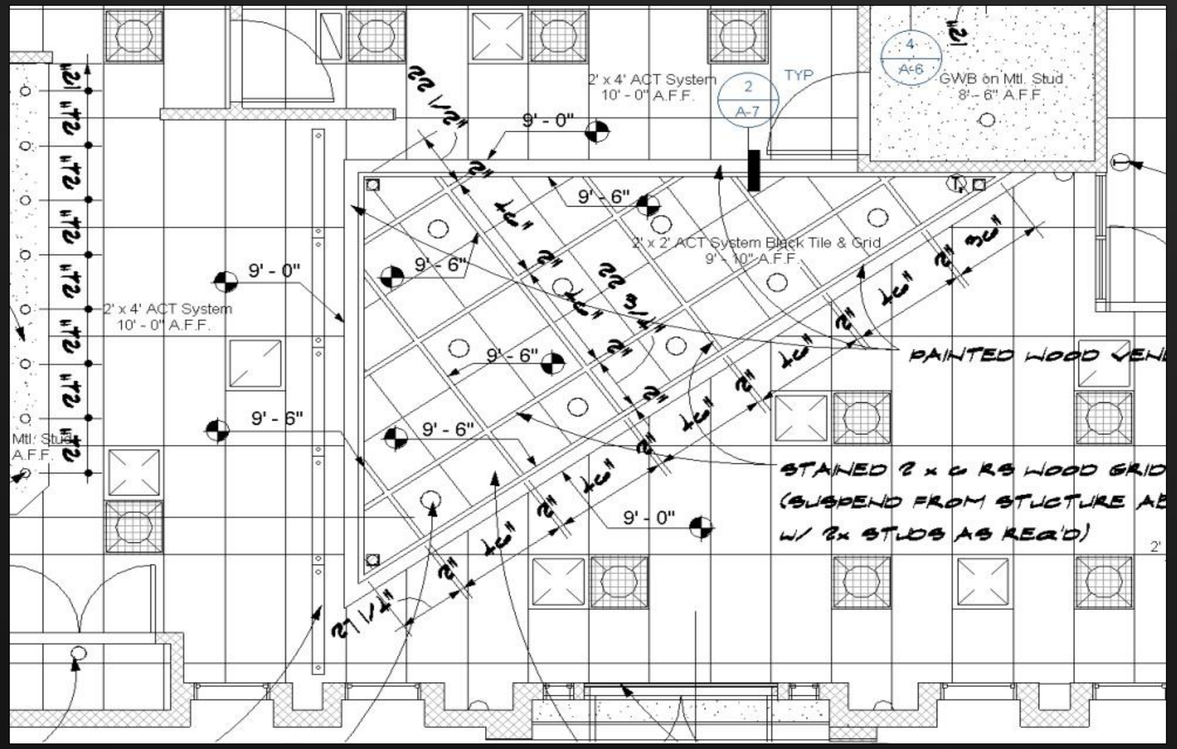
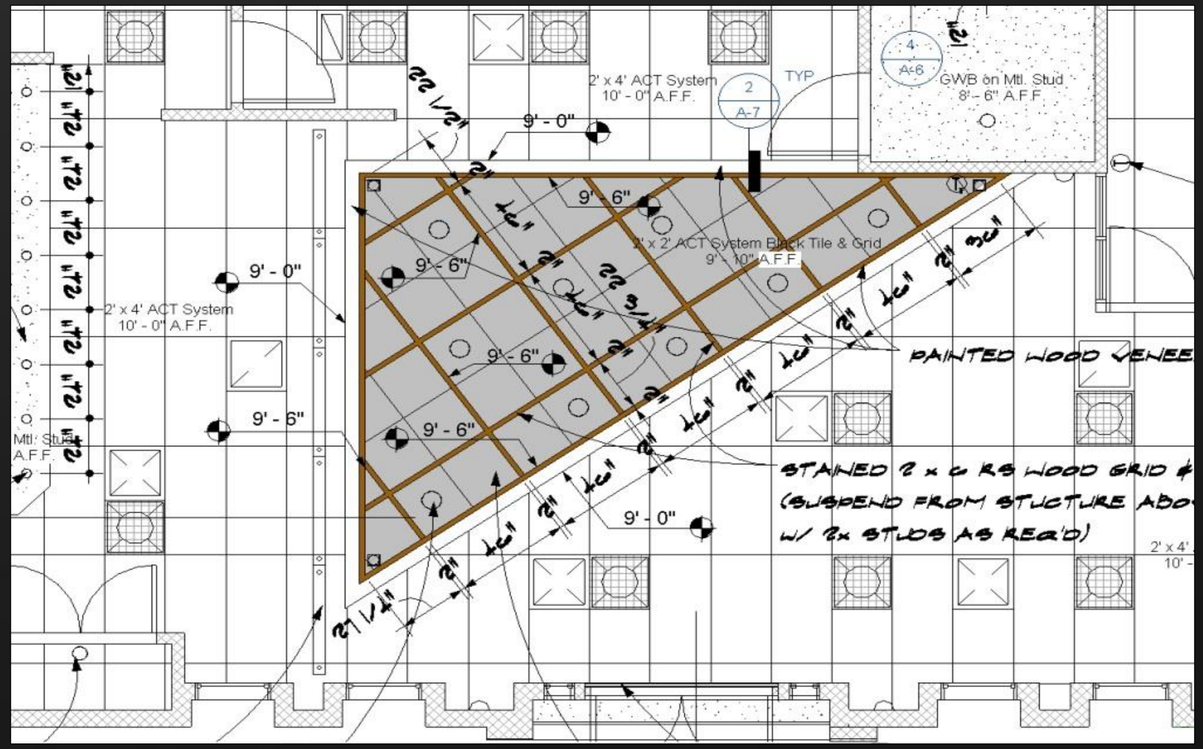
Object Styles

View Specific Overrides (Materials)



Original “Default” Hidden View



Modified View with Surface Pattern Overrides

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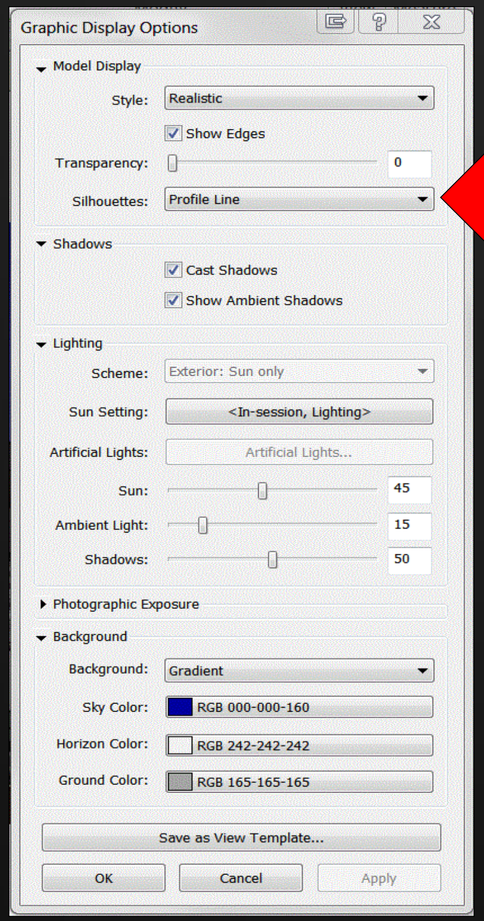
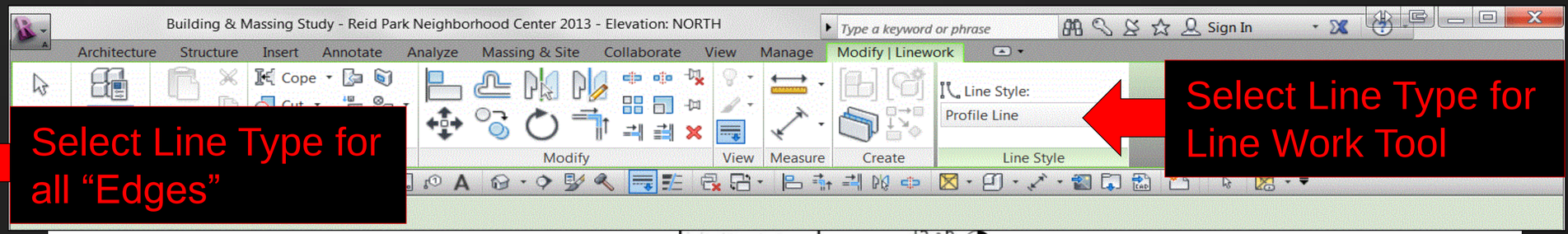
Object Styles

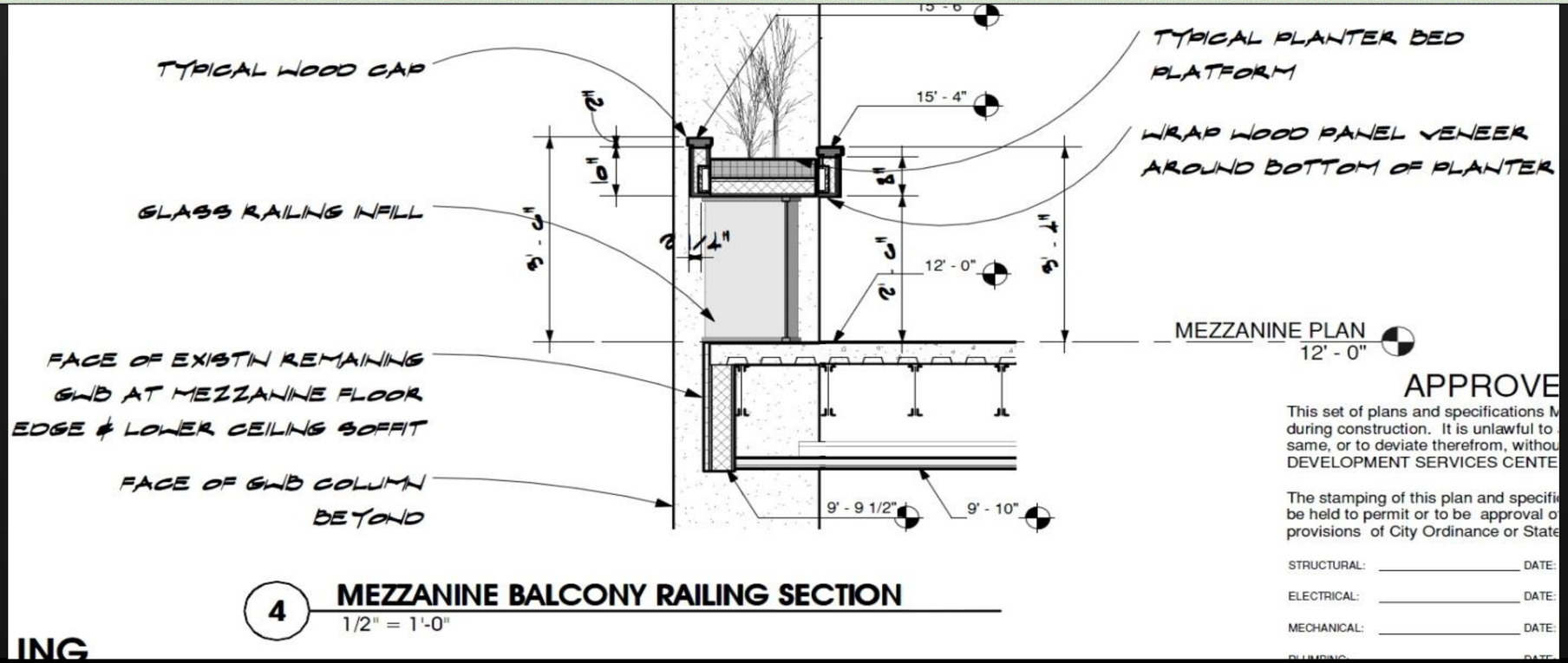
View Specific Overrides (Line Styles)



Select Line Type for all "Edges"



Select Line Type for Line Work Tool



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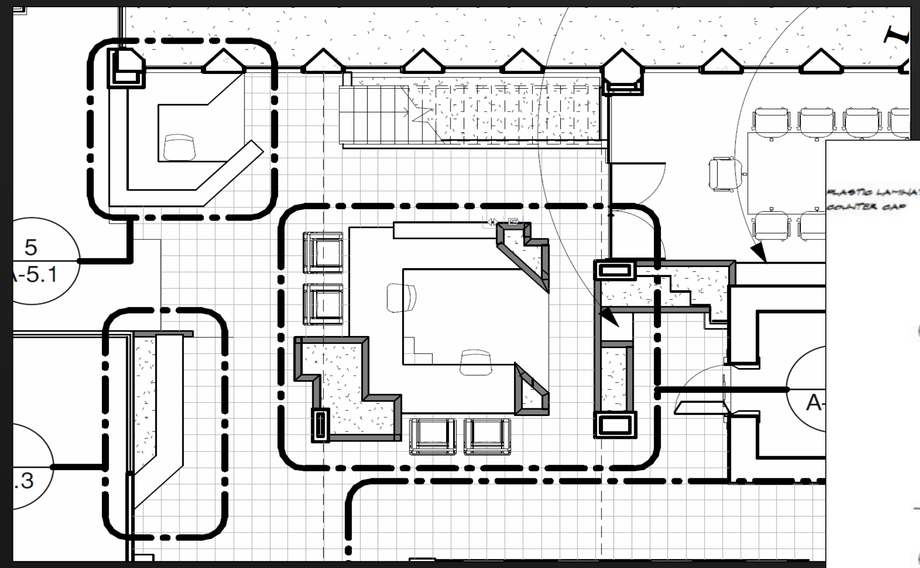
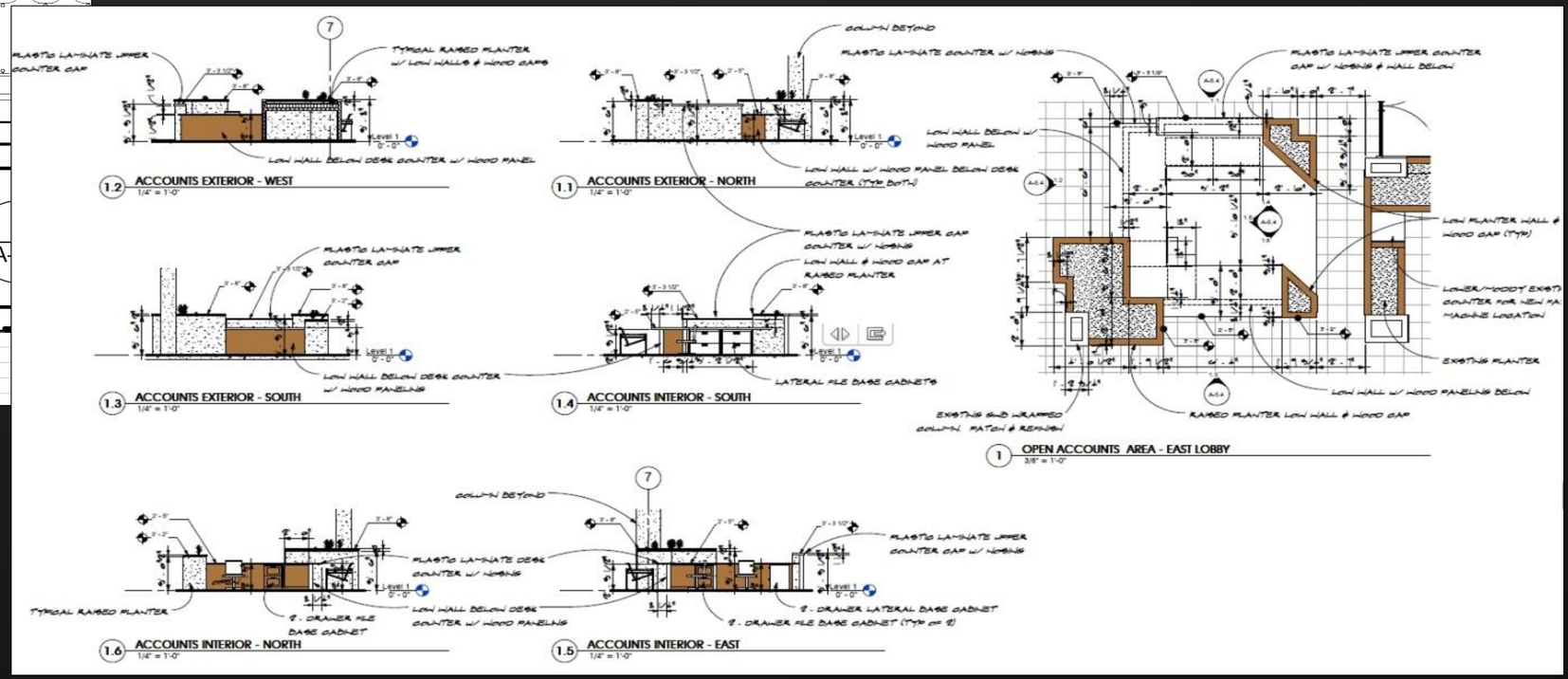
Project View Callouts

Sheet Layout & Numbering Method





Use a Call Out Detail Number vs a North Arrow for Referenced Plan View and Then Number Each Associated Detail or Elevation Callout as Extents

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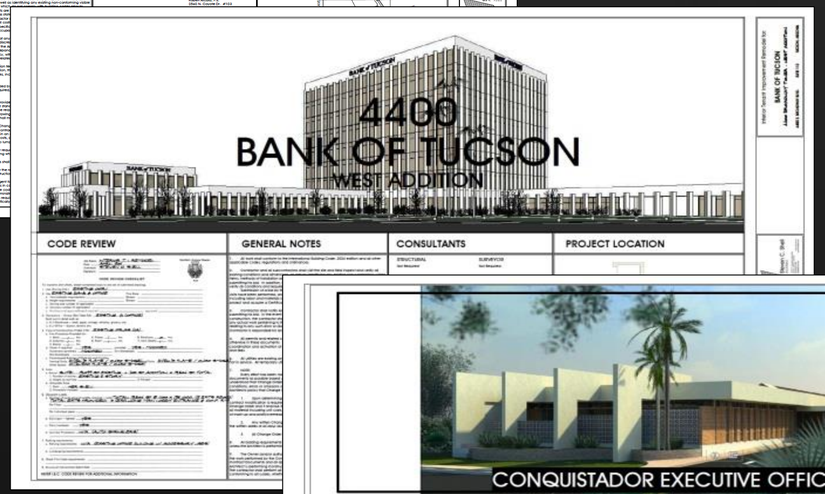
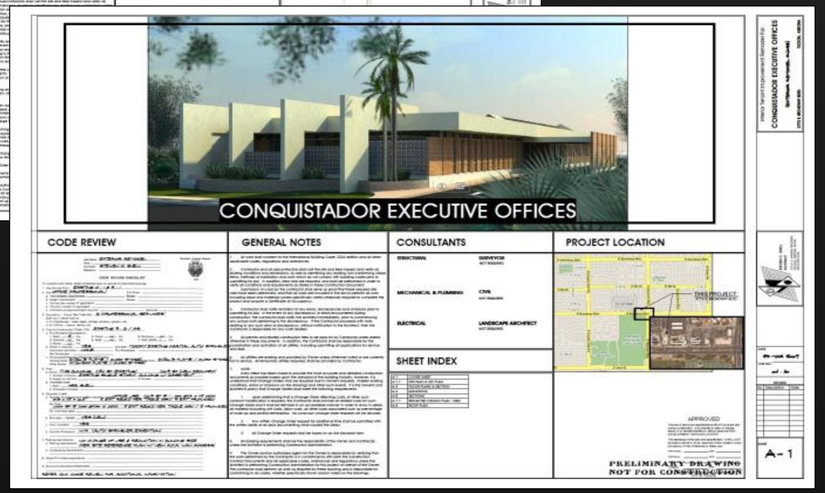
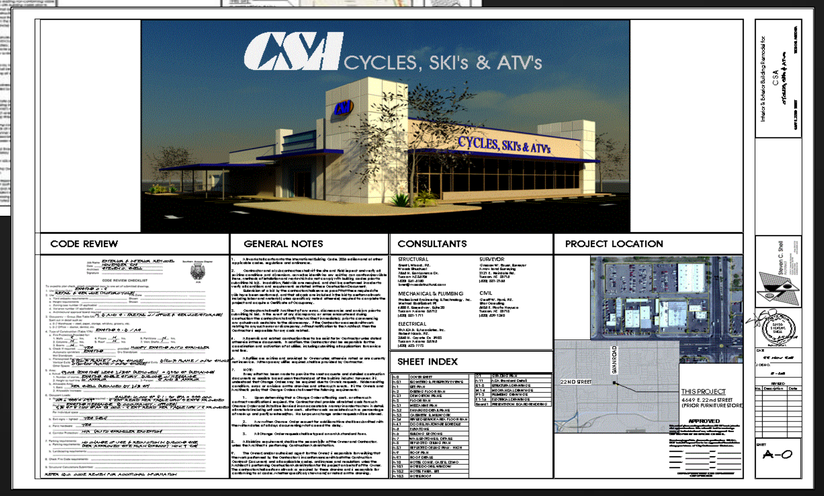
Cover Sheets

Add Images and Artwork to Create Interest







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Section 2

Advanced Graphic Tools and Capabilities

Explore & Take Advantage of the Possibilities

Steven C. Shell
Architect

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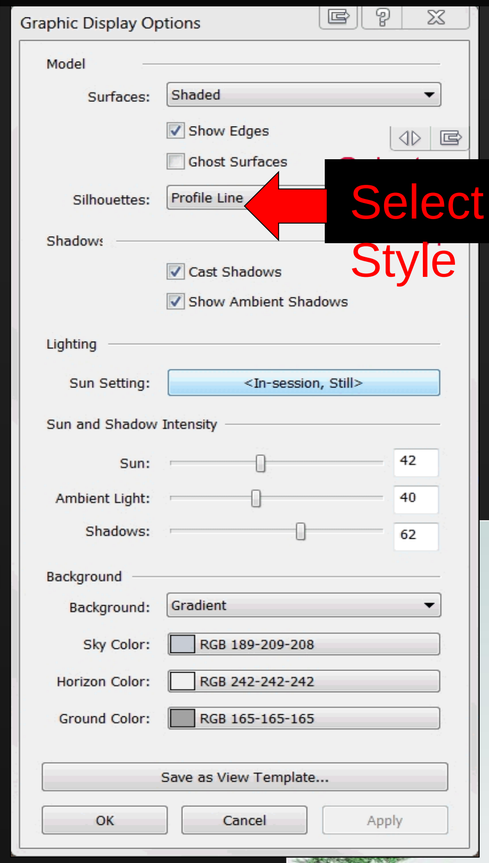
Graphic Display Options

Model – Silhouettes (Profile Edges)



Select Line Style

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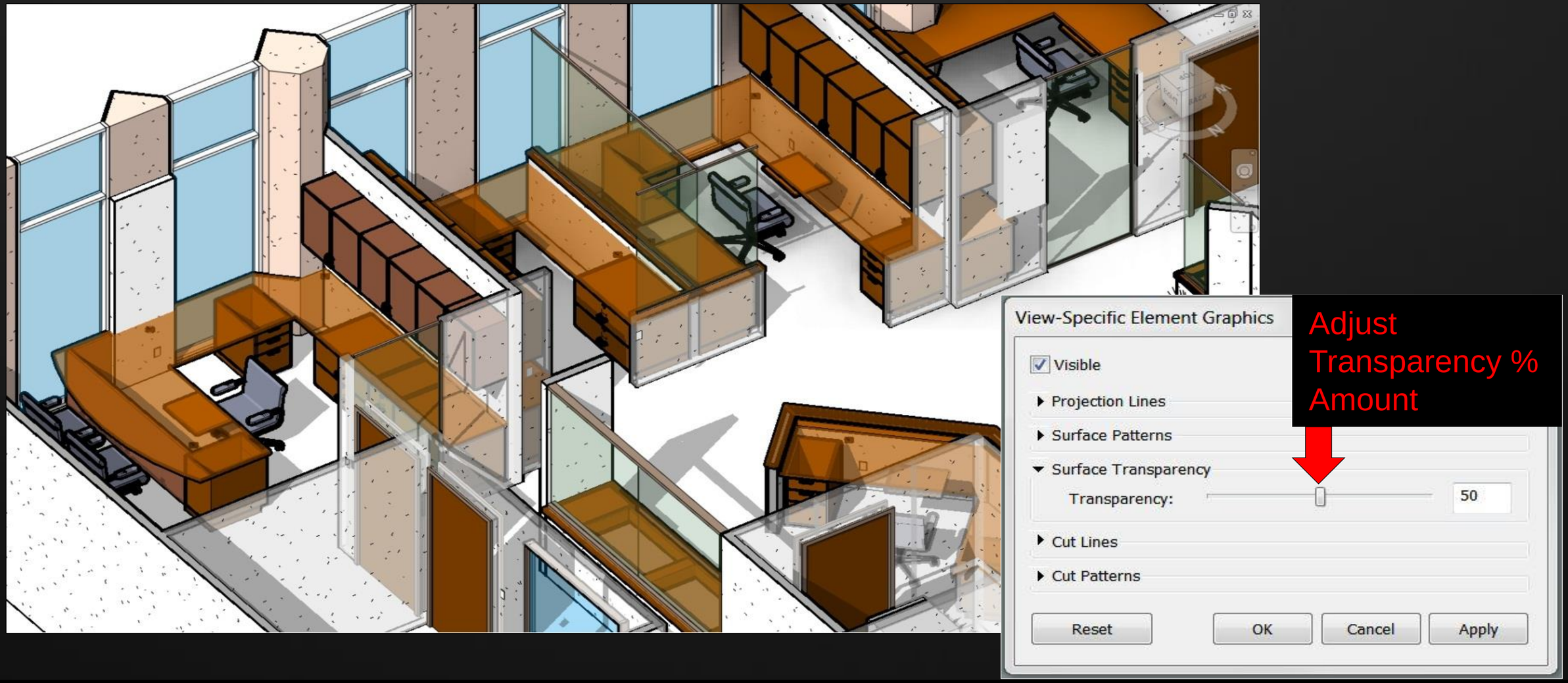
Graphic Display Options

Model - Transparency (Formerly “Ghost Surfaces”)



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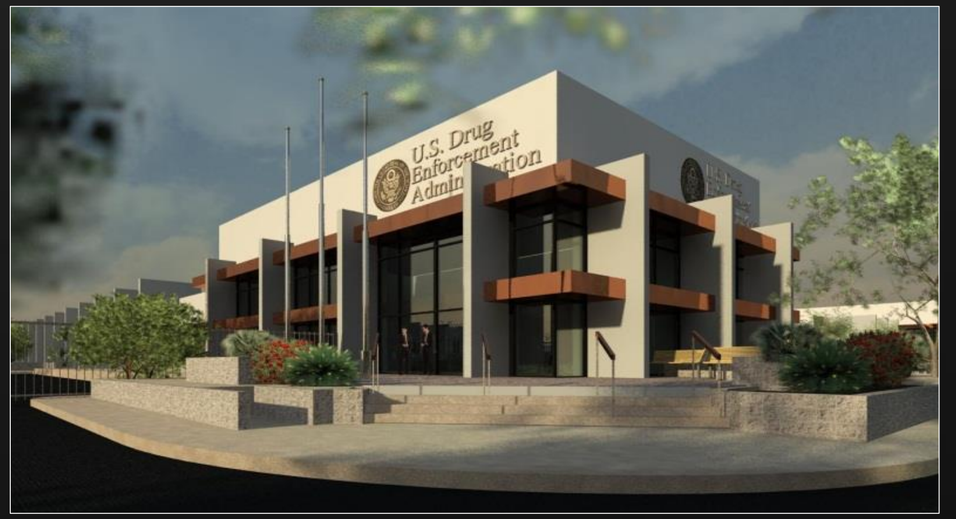
Graphic Display Options

Model – Surfaces (Visual Styles)

Hidden Line

Shaded

Realistic



Rendered

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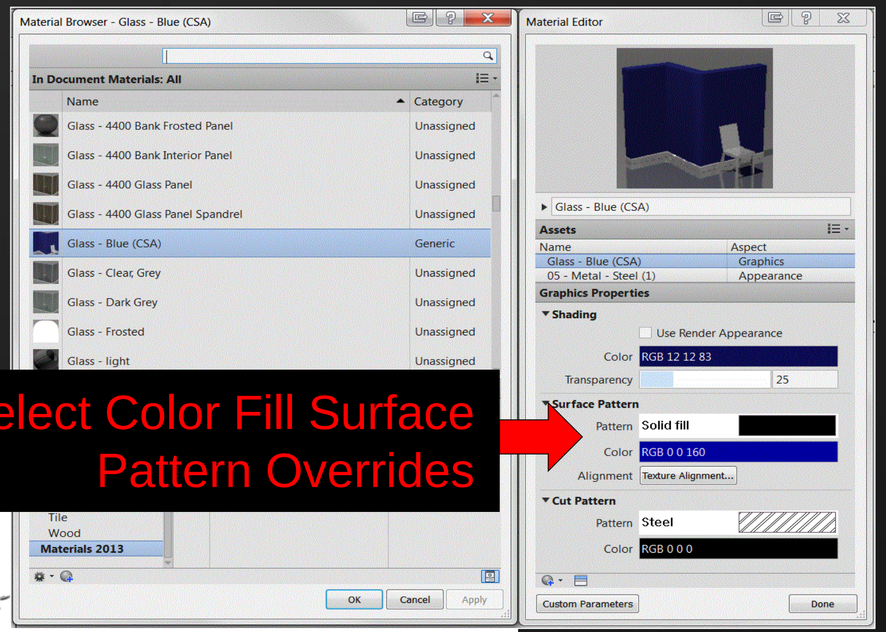
Graphic Display Options

Visual Styles – Hidden Line & Surface Overrides



Select Color Fill Surface Pattern Overrides

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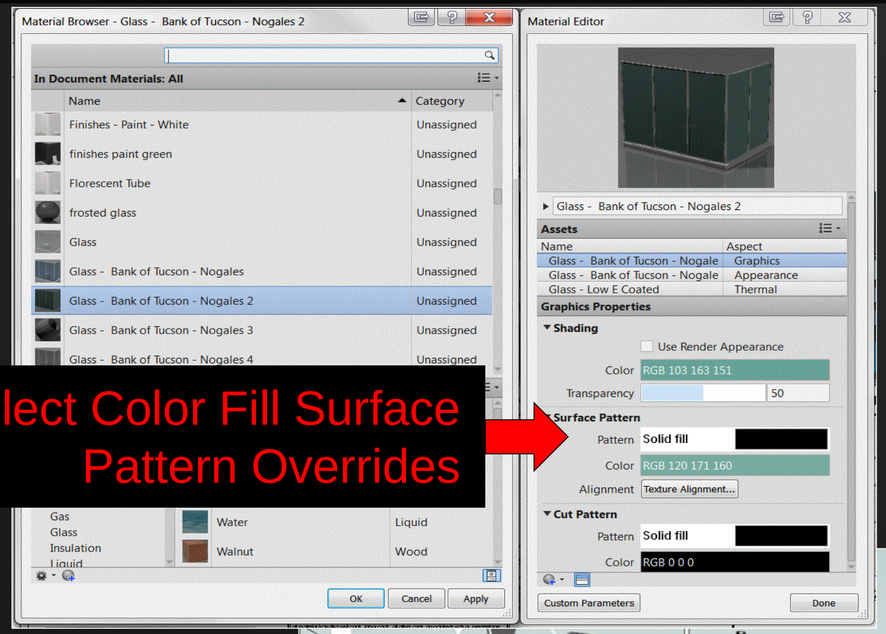
Graphic Display Options

Visual Styles – Hidden Line with Surface Overrides



Select Color Fill Surface Pattern Overrides

Hidden Line with Accent Surfaces

Hidden Line (Default)

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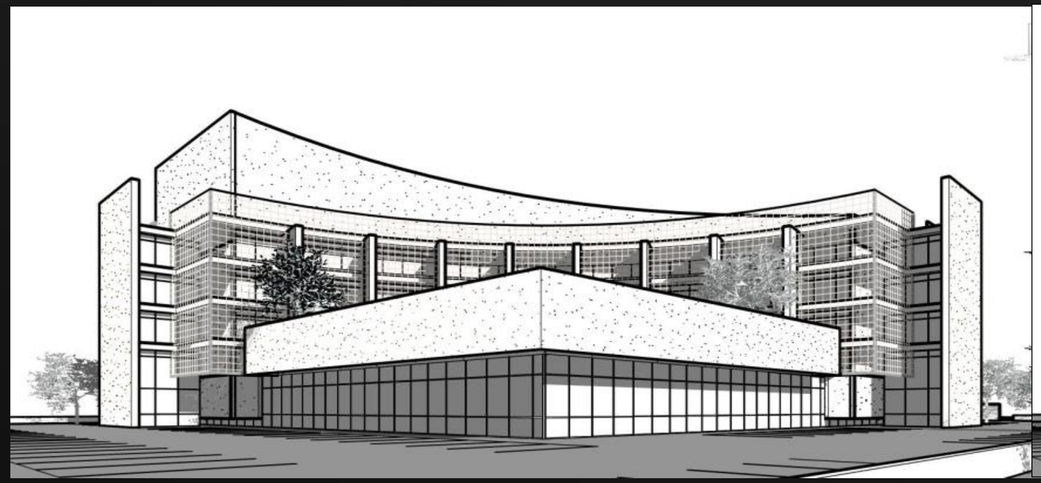
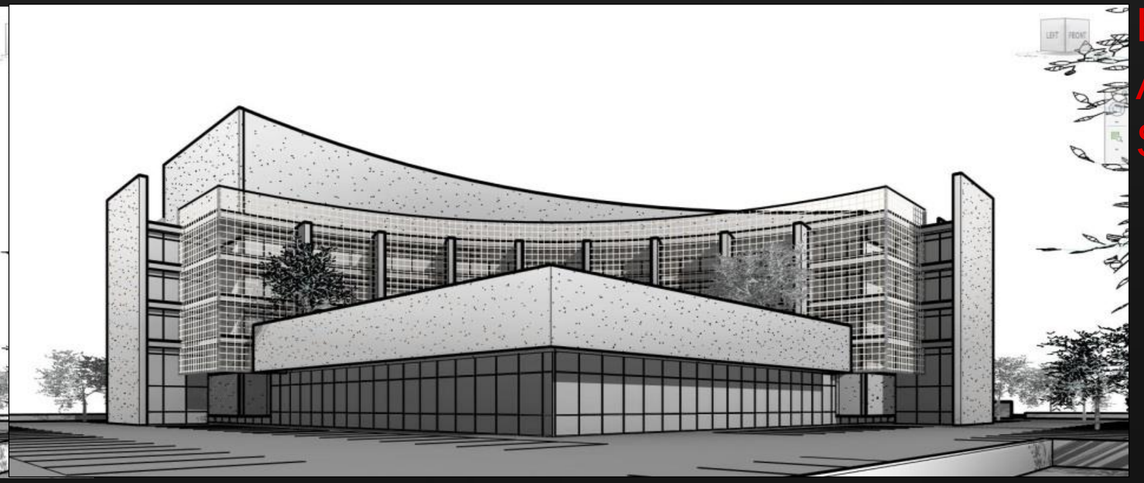
Graphic Display Options

Visual Styles – Ambient Shadows (Added in 2012)

Hidden Line (Default)





Hidden Line w/ Ambient Shadows

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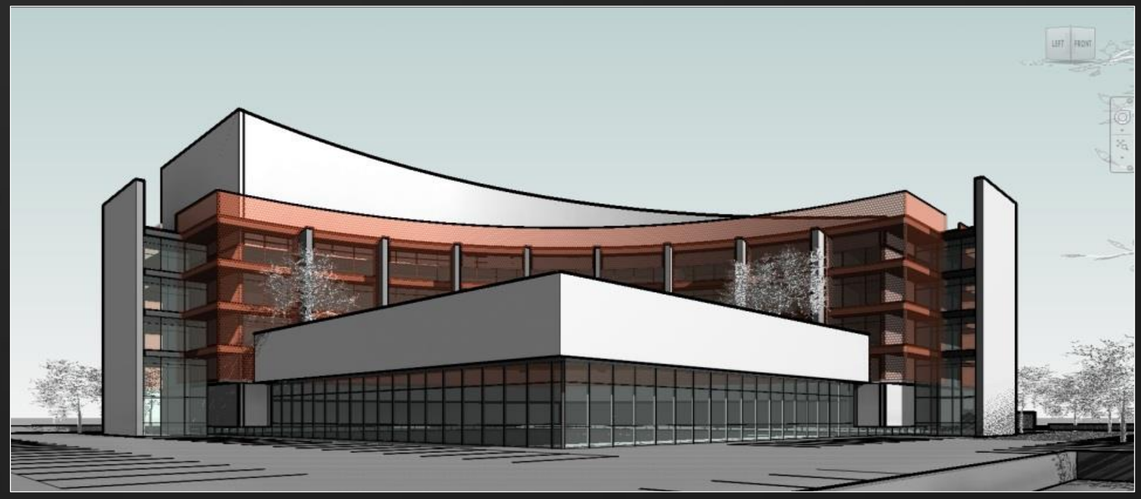
Graphic Display Options

Visual Styles - Realistic with Edges (Added in 2012)



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Graphic Display Options

Visual Styles - Realistic with RPC Content (New in 2013)

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Graphic Display Options

Visual Styles – Photo & Sky Backgrounds (New in 2013)

Sky Background

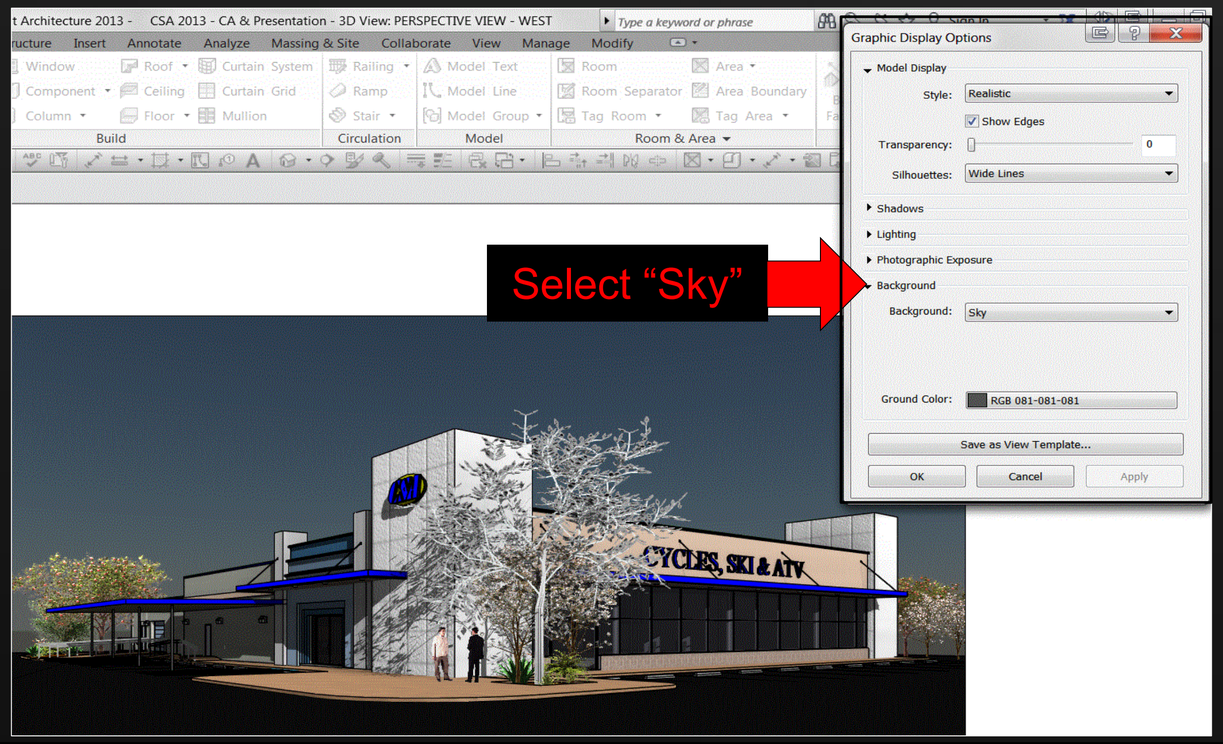
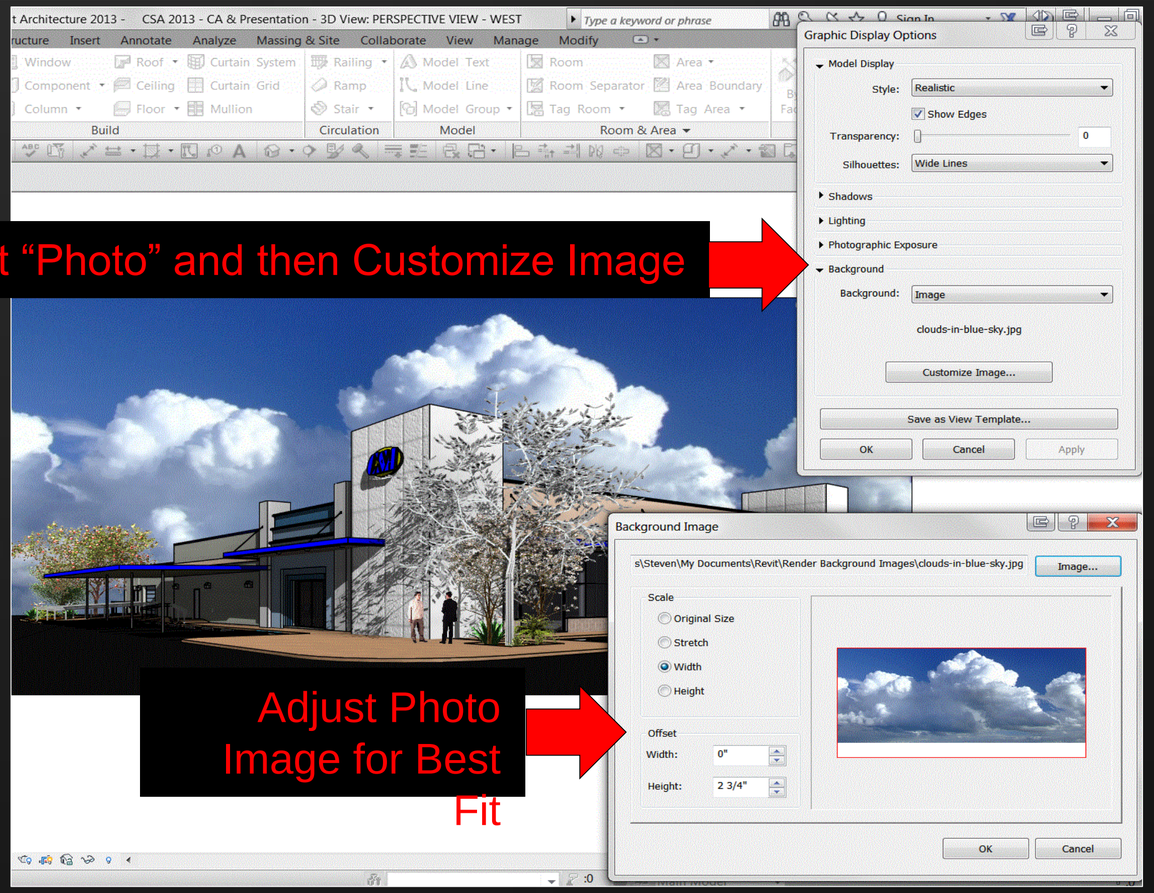


Photo Background



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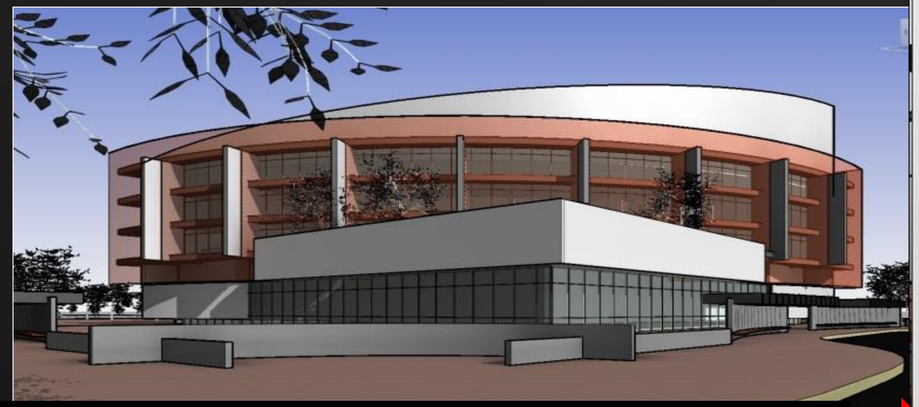
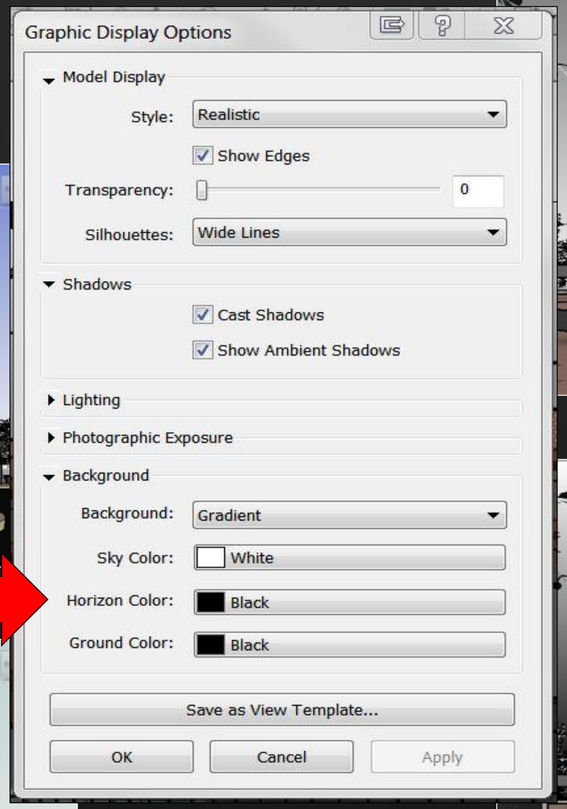
Graphic Display Options

Visual Styles – Backgrounds (Gradient)



Select “Gradient” and Then Colors



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Graphic Display Options

Visual Styles – Elevation & Section Backgrounds (New in 2013)

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Graphic Display Options

Shadow & Lighting (Sun Settings)

Weak, Bland & Flat

Bold, Dynamic & Good Depth

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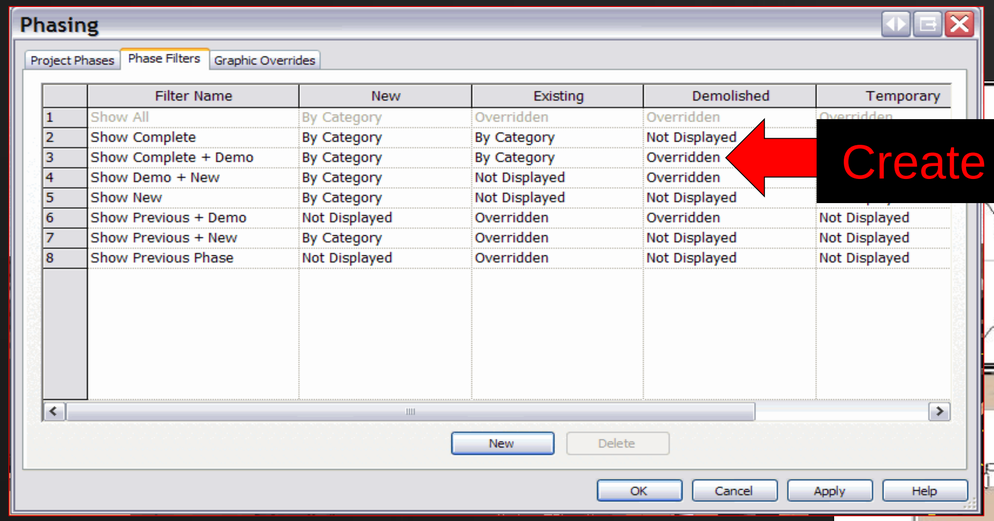
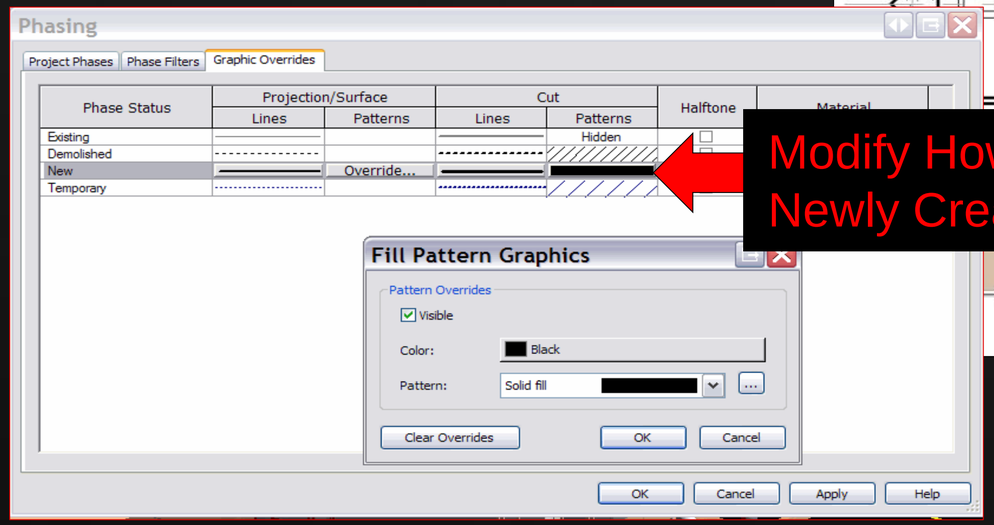
Phase Settings

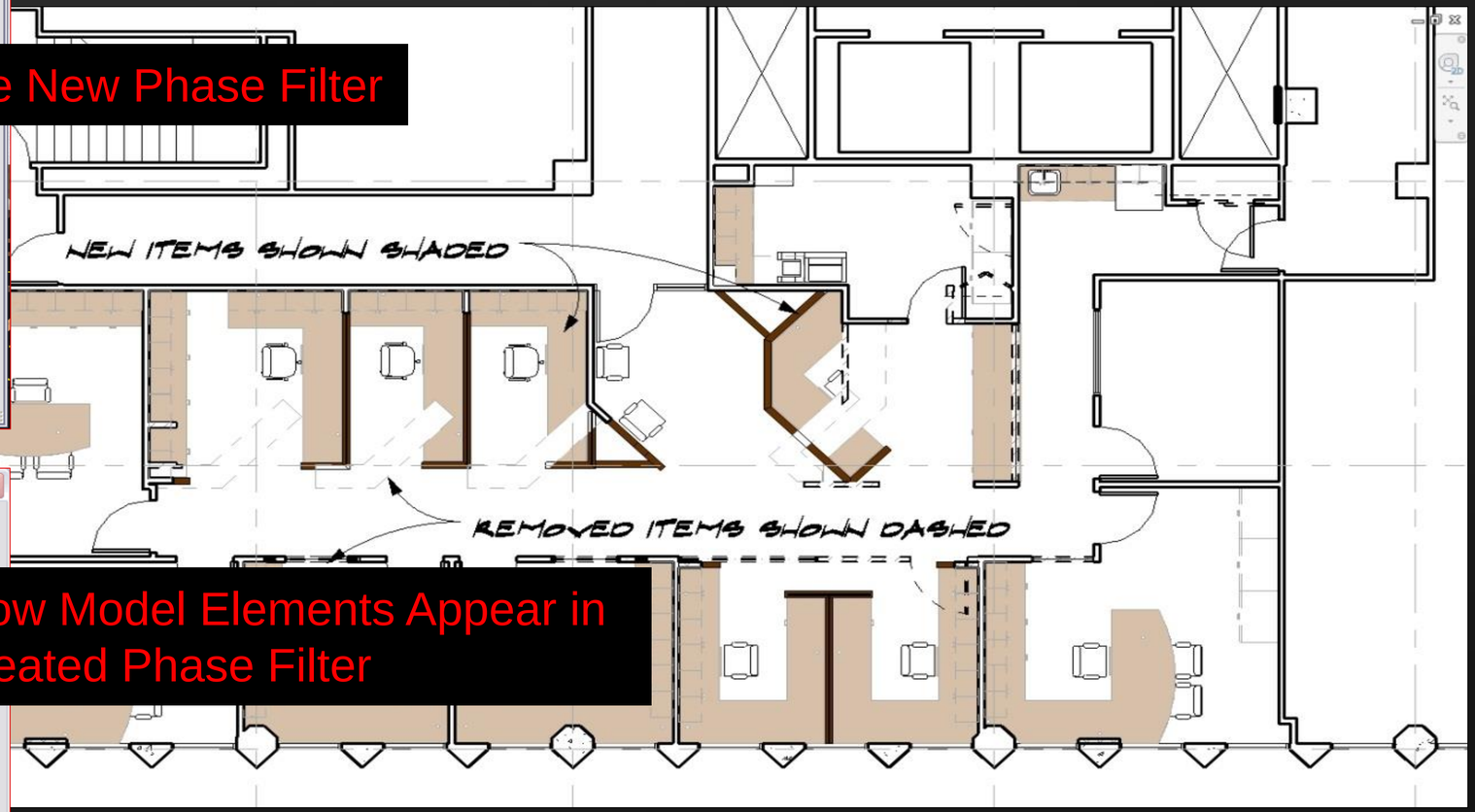
Combine Phases to Create Coordination Views



Create New Phase Filter



Modify How Model Elements Appear in Newly Created Phase Filter



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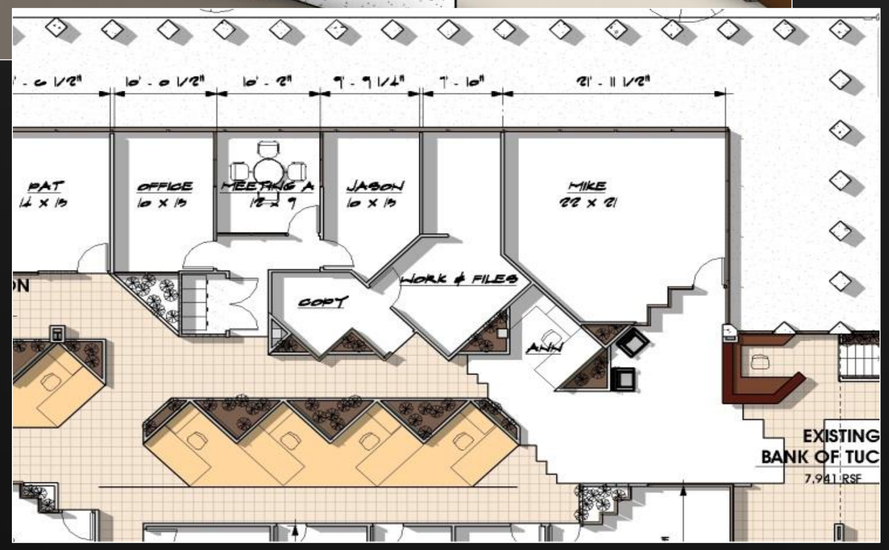
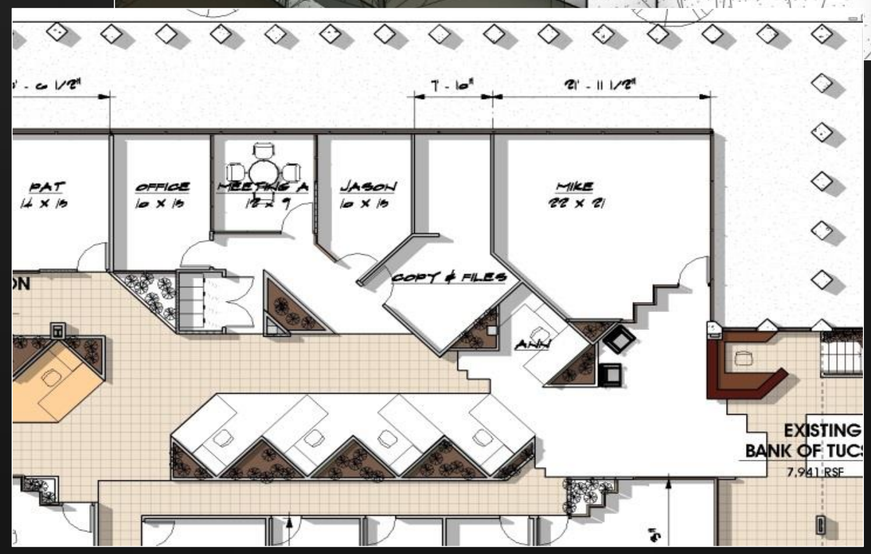
Design Options

Preliminary Designs & Construction Documents

Primary Option
(Primary Bid)





Design Option 1
(Alternate Bid)

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Section 3

Presentation Techniques

Non-Rendered Views

Steven C. Shell
Architect

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Graphic Display Options

Presentation Based on Level of Design

Conceptual Design

Design Development

Final Design

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Graphic Display Options

Presentation Based on Level of Design

Conceptual Design

Design Development

© 2012 Autodesk

Graphic Display Options

Presentation Based on Level of Design

Conceptual Design

Design Development

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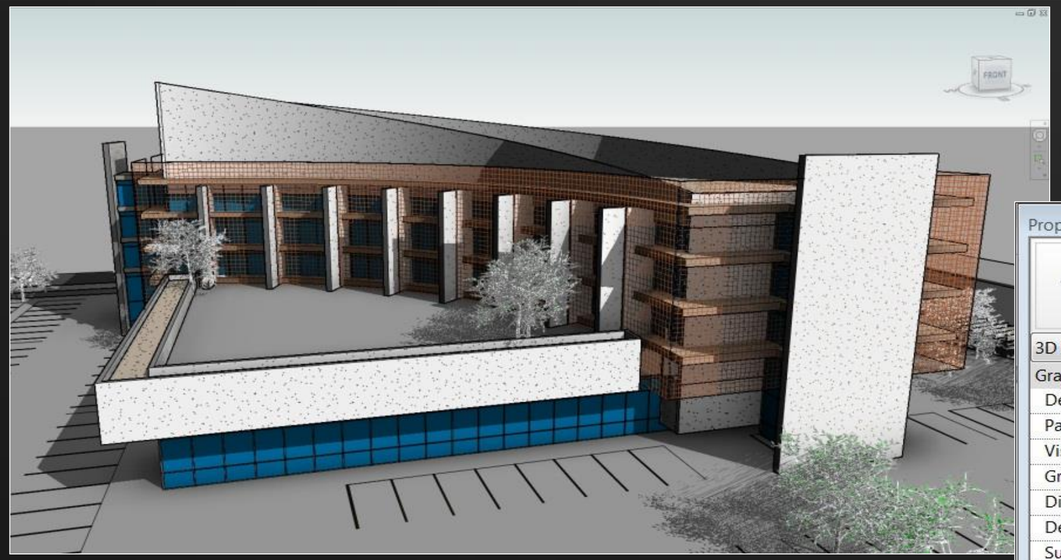
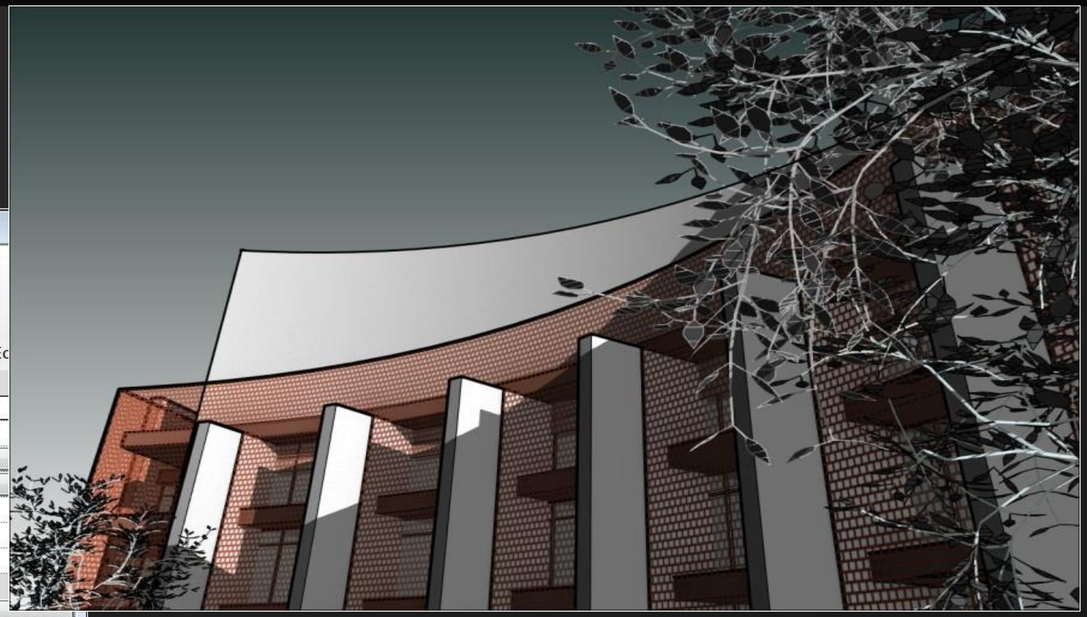
Graphic Techniques

Create Visually Dynamic Views





Properties

3D View

3D View: Upward Perspective

Graphics	
Detail Level	Medium
Parts Visibility	Show Original
Visibility/Graphics Overr...	Edit...
Graphic Display Options	Edit...
Discipline	Architectural
Default Analysis Display...	None
Sun Path	
Identity Data	
View Template	<None>
View Name	Upward Perspective
Dependency	Independent
Title on Sheet	
Extents	
Crop Region Visible	
Far Clip Active	
Far Clip Offset	627' 3 3/8"
Section Box	
Crop View	
Camera	
Rendering Settings	Edit...
Locked Orientation	
Perspective	
Eye Elevation	30' 0"
Target Elevation	300' 0"
Camera Position	Explicit
Phasing	
Phase Filter	Show Complete
Phase	New Construction

Create Unique & Strong Images by Using Various Eye Levels and Target Elevations, Forcing the Perspective to Create Visual Interest

Modify Eye & Target Elevations

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Graphic Techniques

Personalize Your Design

Place Yourself Inside the Project in Order to Add Human Scale to Personalize Your Design

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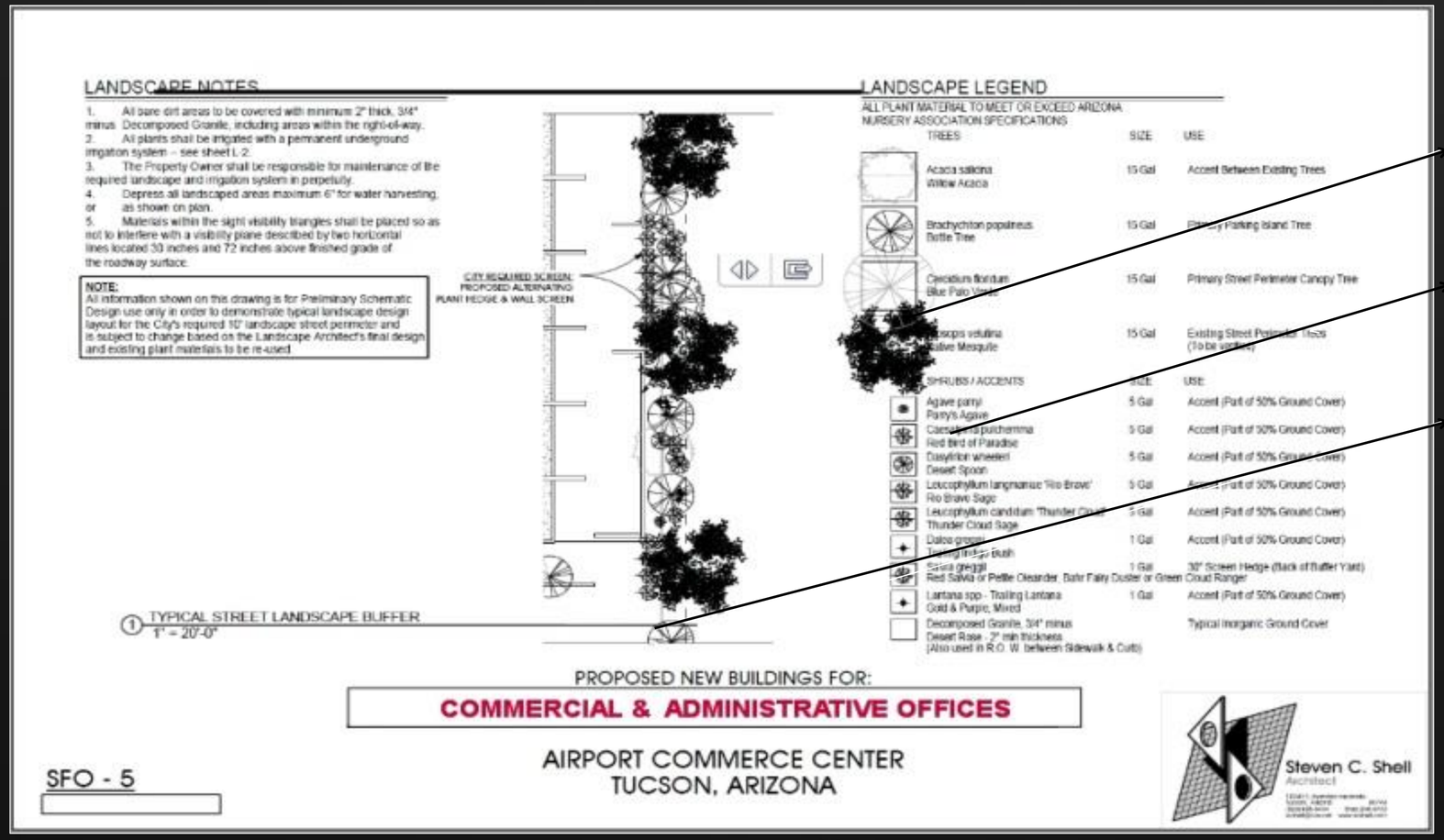
Graphic Techniques

Overlay Plans with Imported DWG files



- Revit Trees & Plants
- Imported dwg Drawing File (Partially Exploded to Remove Original Plant Images)
- View Callout From Revit Site Plan

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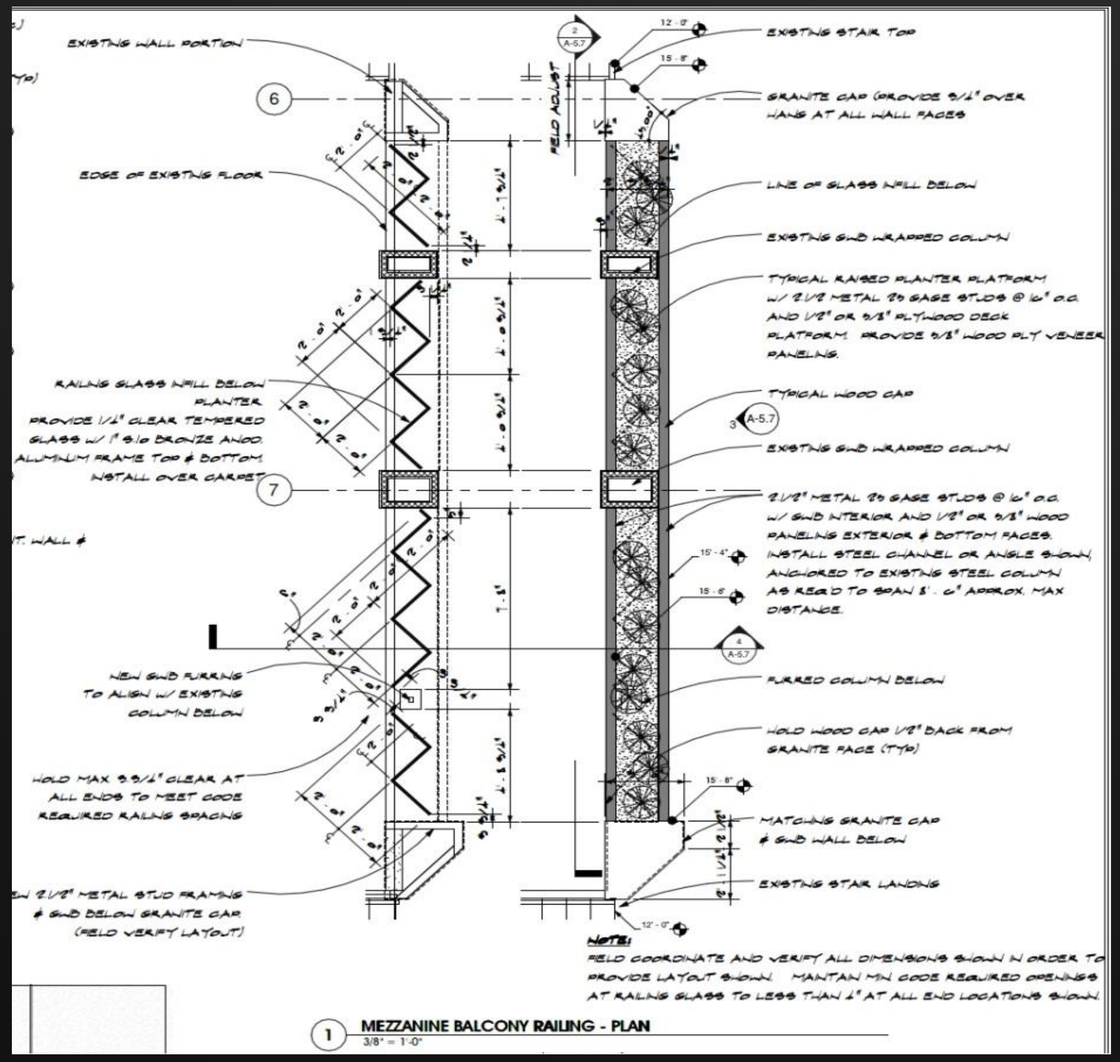
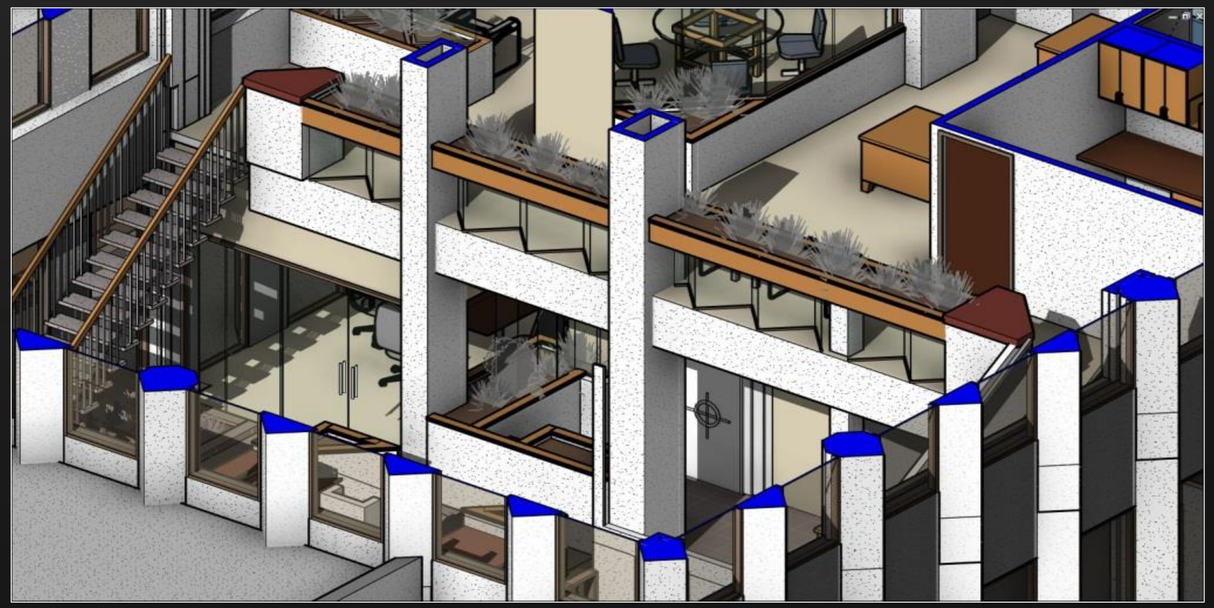
Graphic Techniques

Duplicate Plans with Modified Cut Plane Offsets



Multiple Aligned Views with only One View Title Visible (Place Annotations on One View, Dragging Levels, Section Cuts & Dimensions Across Both Plans)



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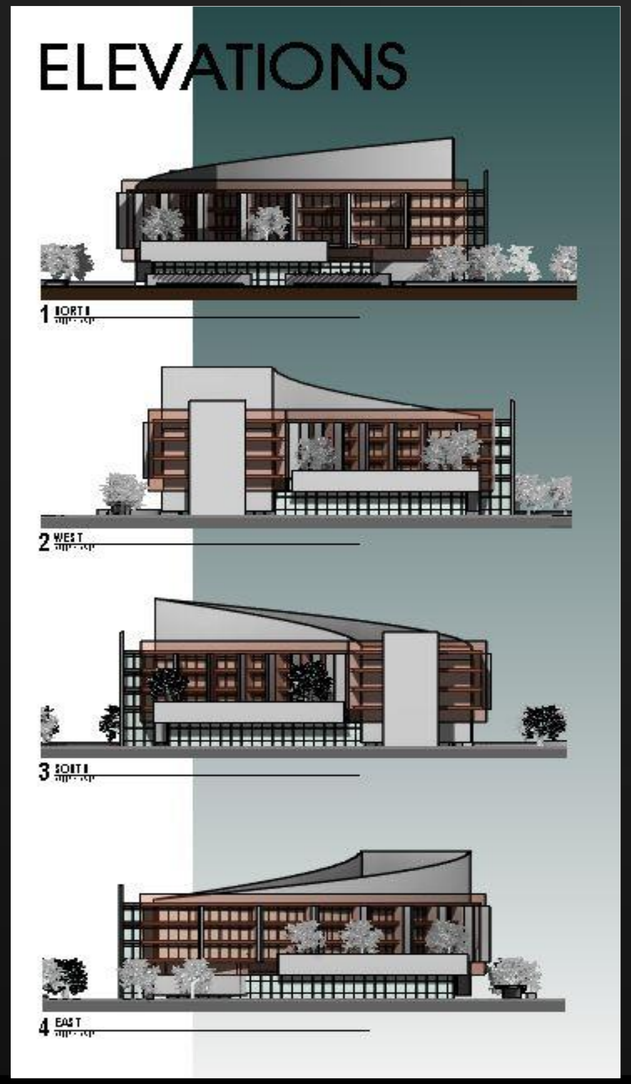
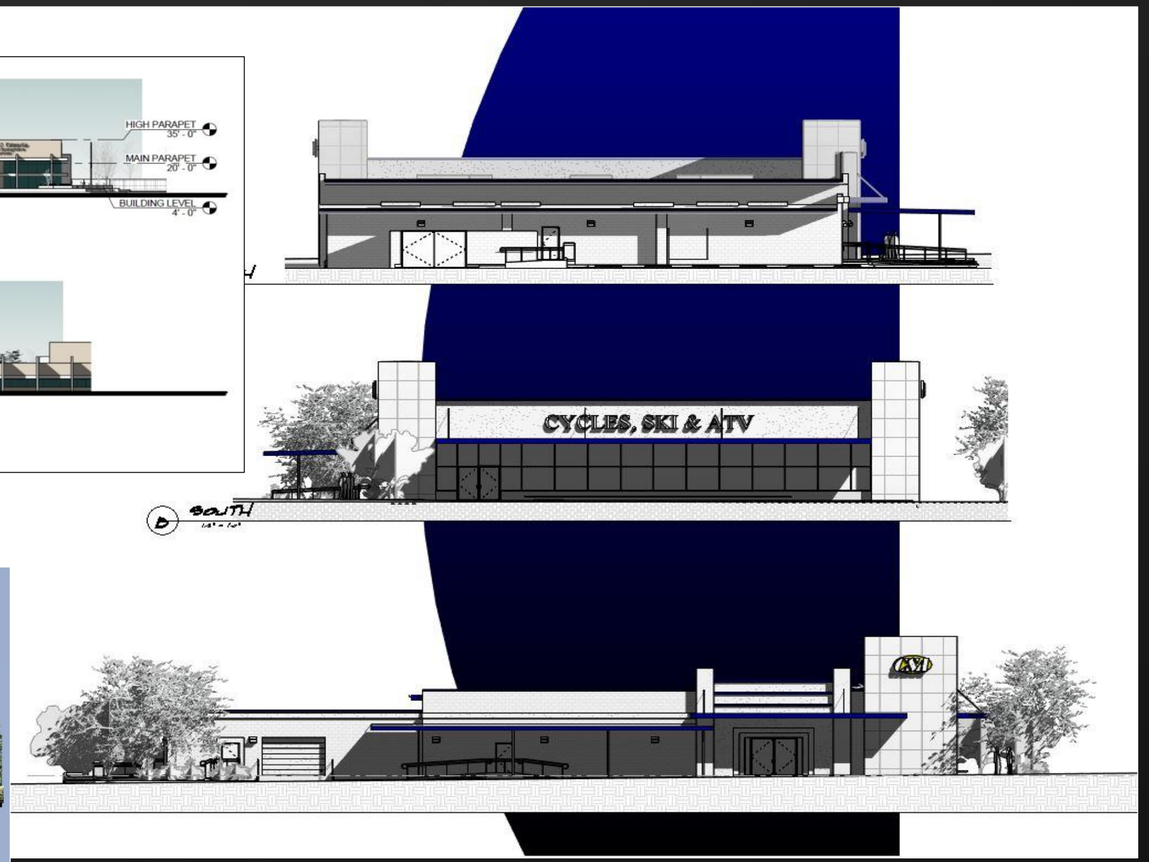
Graphic Techniques

Multiple Elevations with Gradient Background





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Graphic Techniques

Multiple Overlaid Views with Varied Transparency (New in 2013)

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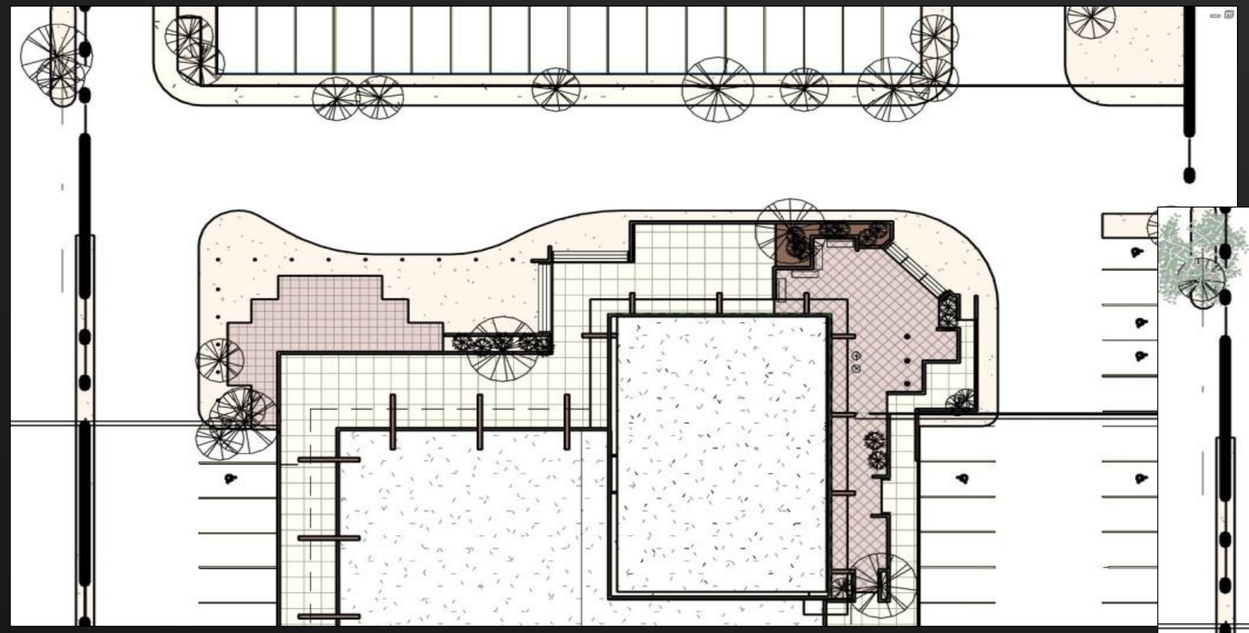
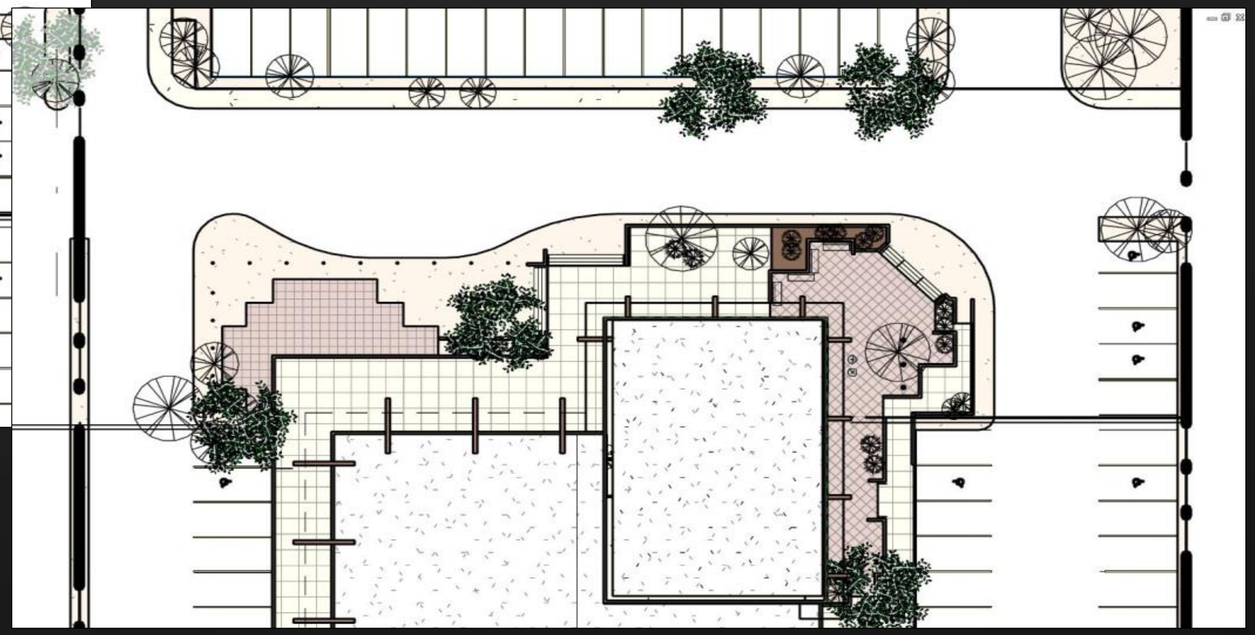
Plants & Trees

Rendered & Non-Rendered Views



Plan for Rendered Views with Detail Level Set to “Course”



Plan for Non-Rendered Views with Detail Level Set to “Fine”

Rendered and Non-Rendered Views
Using Duplicate Plants & Trees
(Control Visibility by Detail Level)

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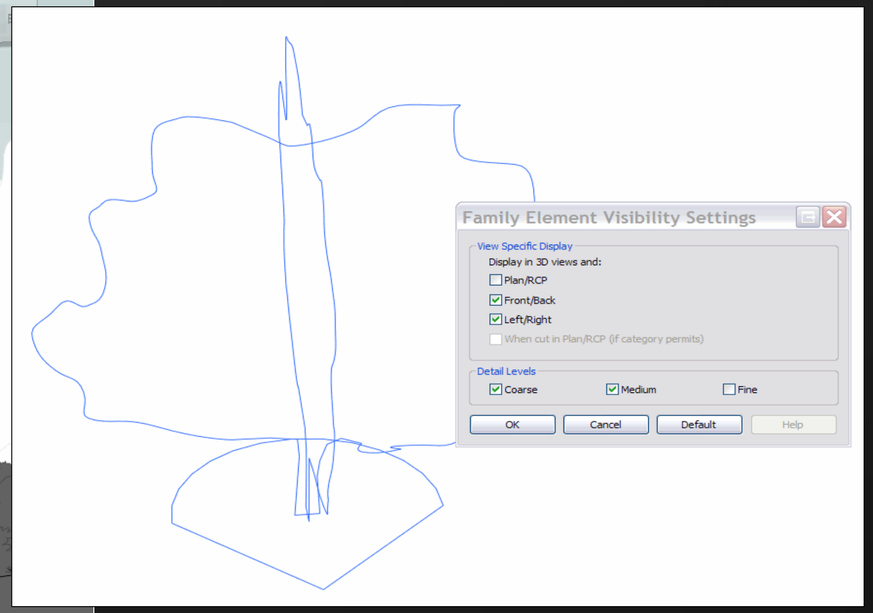
Plants & Trees

Rendered Views



Edit Family to Select Visibility Settings

Set Up View for Rendering Using RPC Plants & Trees
(“Course” or “Medium” Detail Level Setting)

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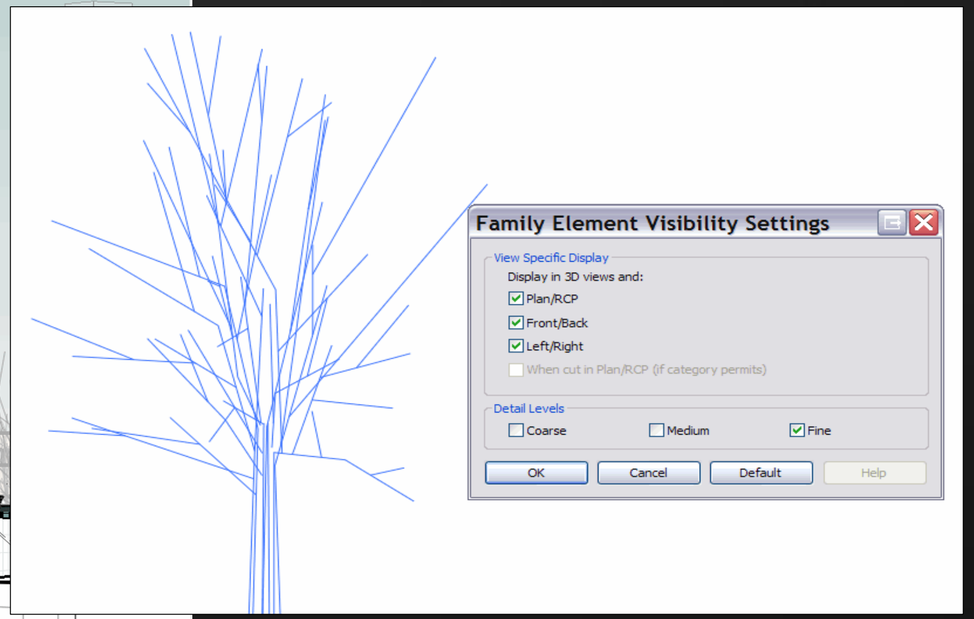
Plants & Trees

Non-Rendered Views



Edit Family to Select Visibility Settings

Non-Rendered Views Using Alternate Plants & Trees which are not RPC Content (“Fine” Detail Level Setting)

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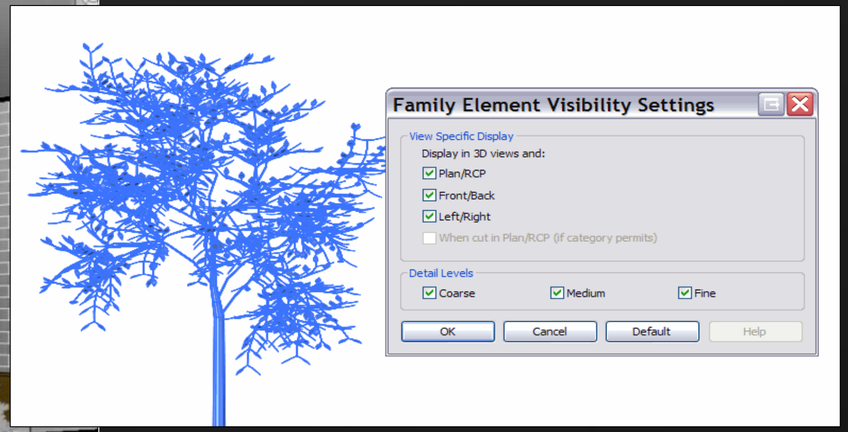
Plants & Trees

Non-Rendered Views (Mixed Types of Plants)



Edit Family to Select Visibility Settings

Non-Rendered Views Using Both Alternate Plants & Trees with Some RPC Content (Adjusting Visibility Settings & Hiding View Based Visibility)

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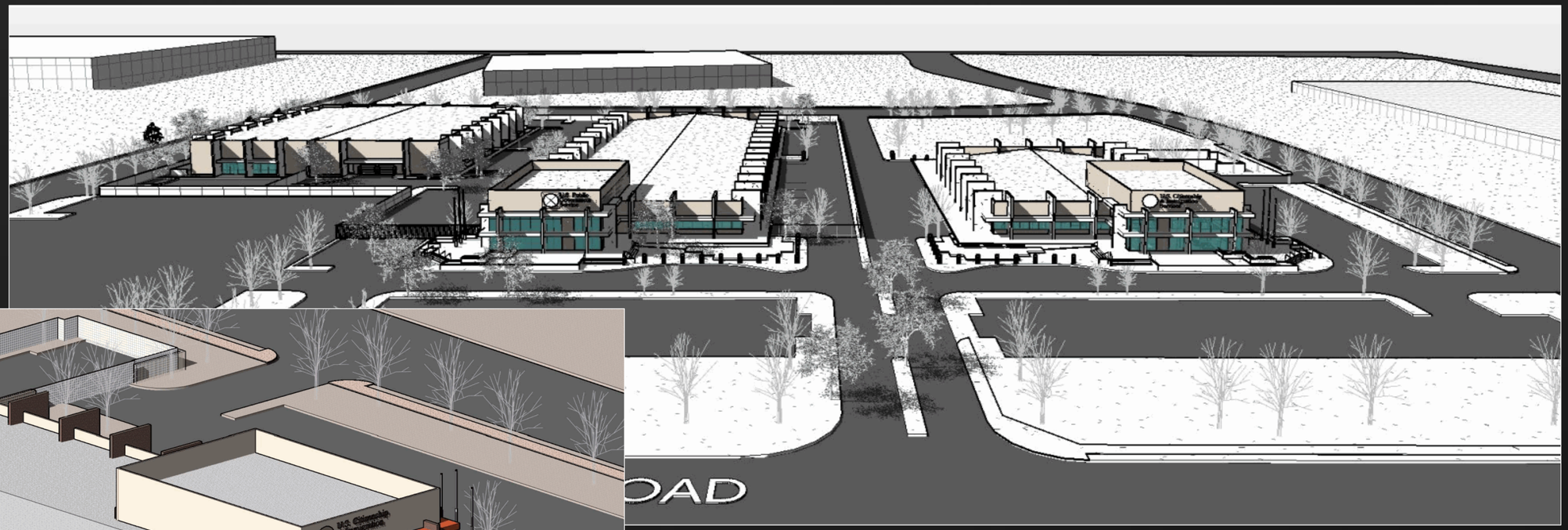
Plants & Trees

Non-Rendered Views



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Section 4

Presentation Techniques

Rendered Views

Steven C. Shell
Architect

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Rendering Techniques

Exterior Views

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Rendering Techniques

Interior Views

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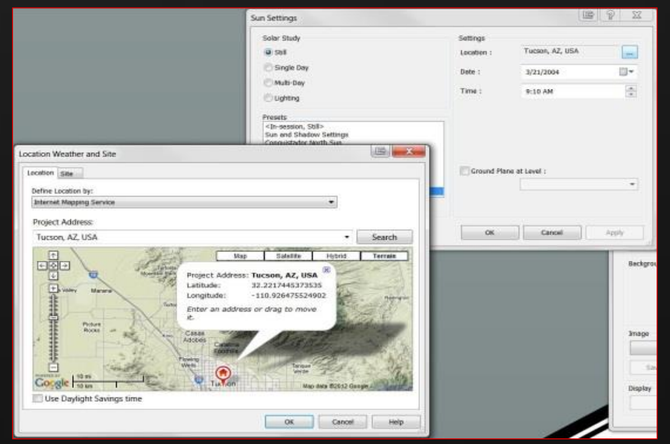
Rendering Techniques

Sun Settings



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Rendering Techniques

Sun Settings – Sunrise to Night Views

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Rendering Techniques

Sun Settings – Sunrise to Night Views

© 2012 Autodesk

Rendering Techniques

Photo Image Underlays

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Rendering Techniques

Photo Image Underlays

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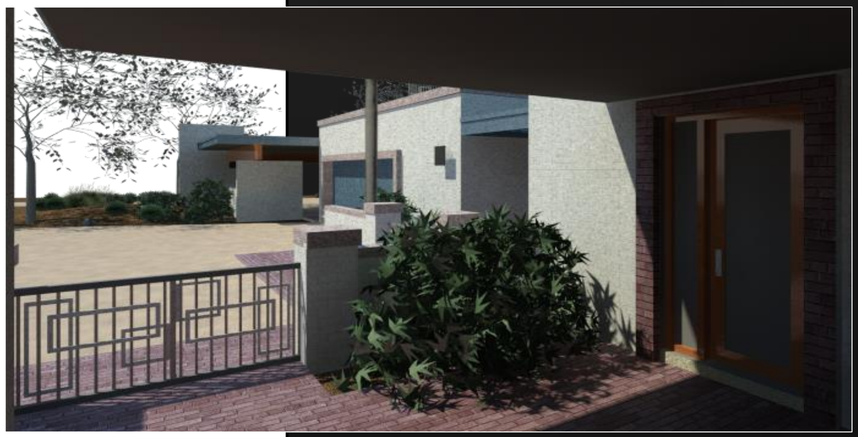
Rendering Techniques

Photo Image Underlays



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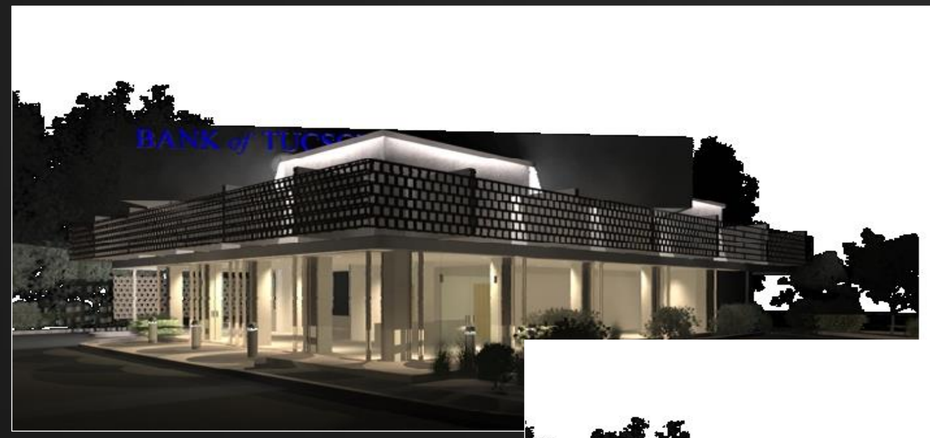
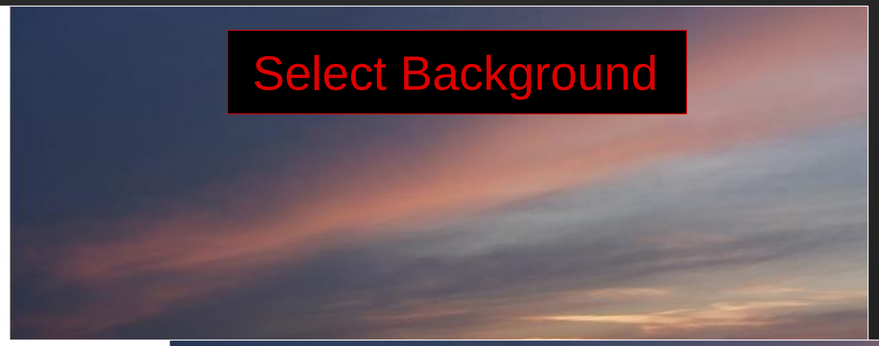
Rendering Techniques

Photo Image Underlay Process



Exported “Alpha” Channel Image, saved as .png File



Open a New Drafting View and Place “Alpha” Channel Rendering on top of background photo.

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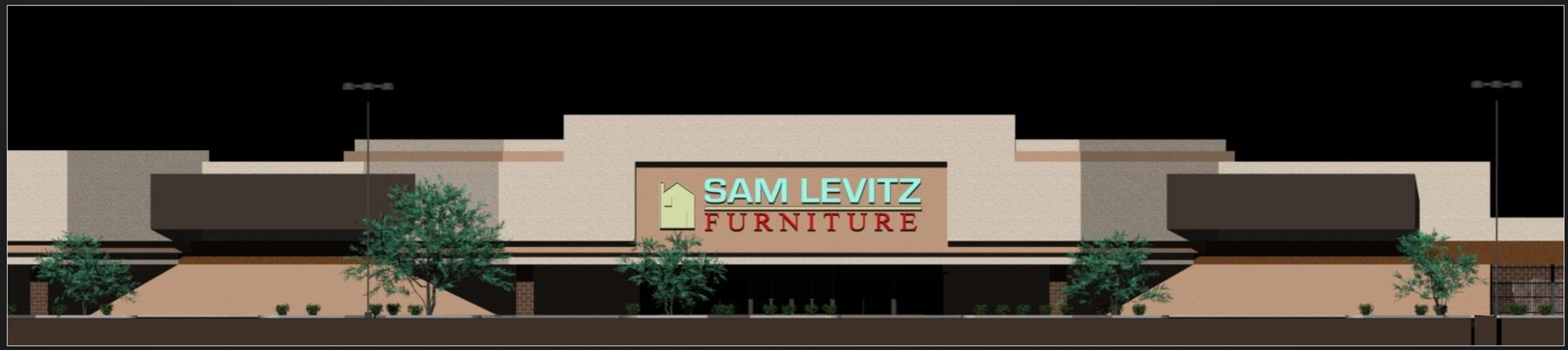
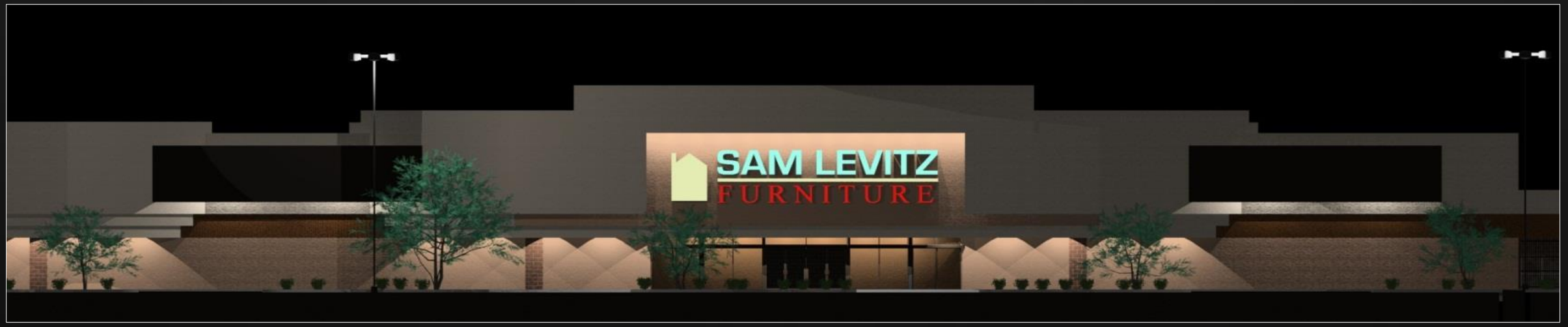
Rendering Techniques

Rendered Elevations – Day & Night Views





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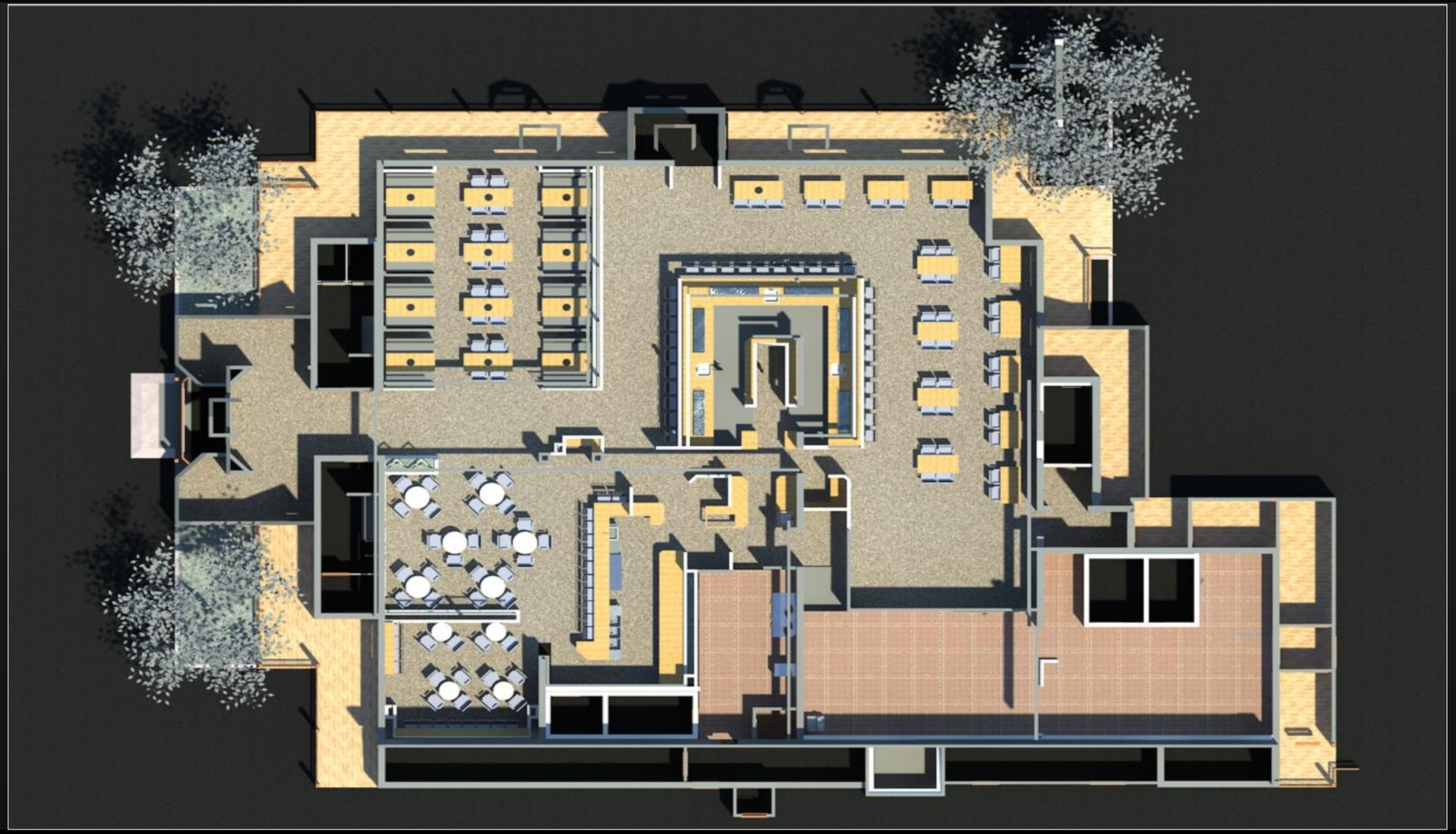
Rendering Techniques

Rendered Plan Views



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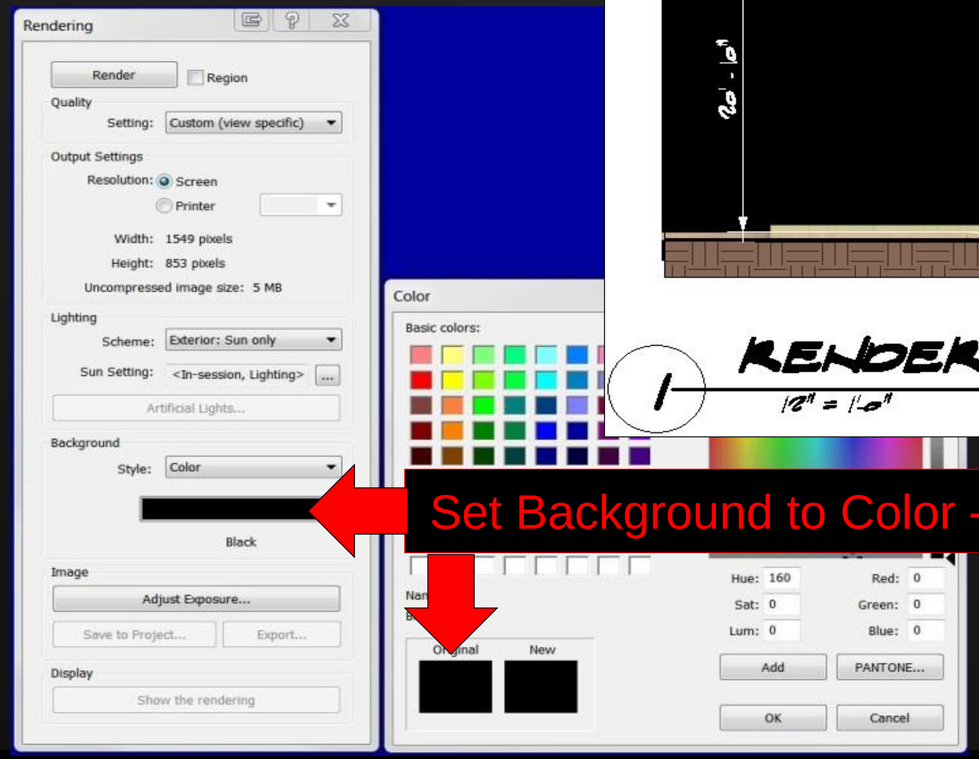
Rendering Techniques

Rendered Elevations – Reversed Background



Set Background to Color - Solid Black

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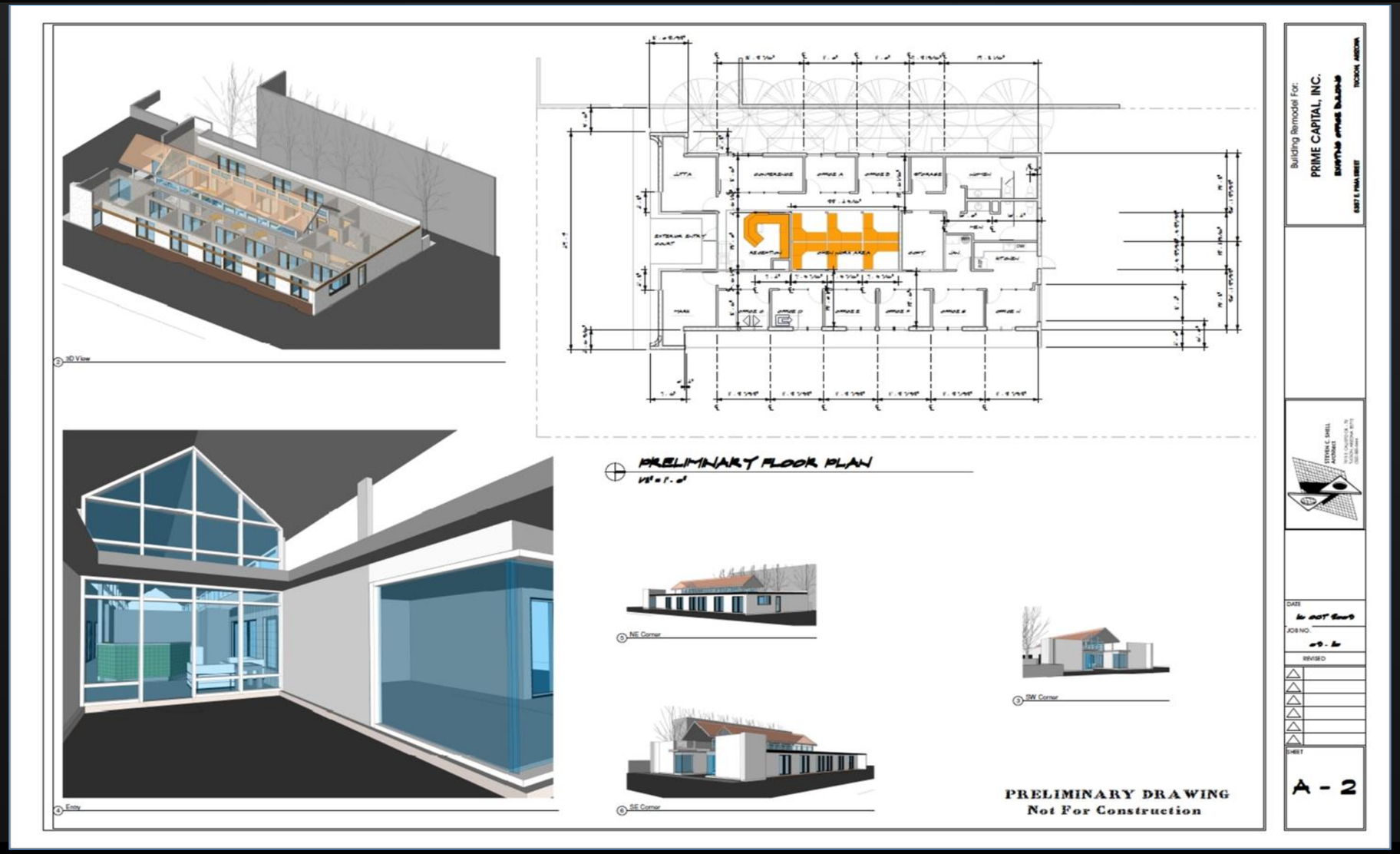
Practice Makes Perfect!

My First Autodesk® Revit® Presentation in 2003



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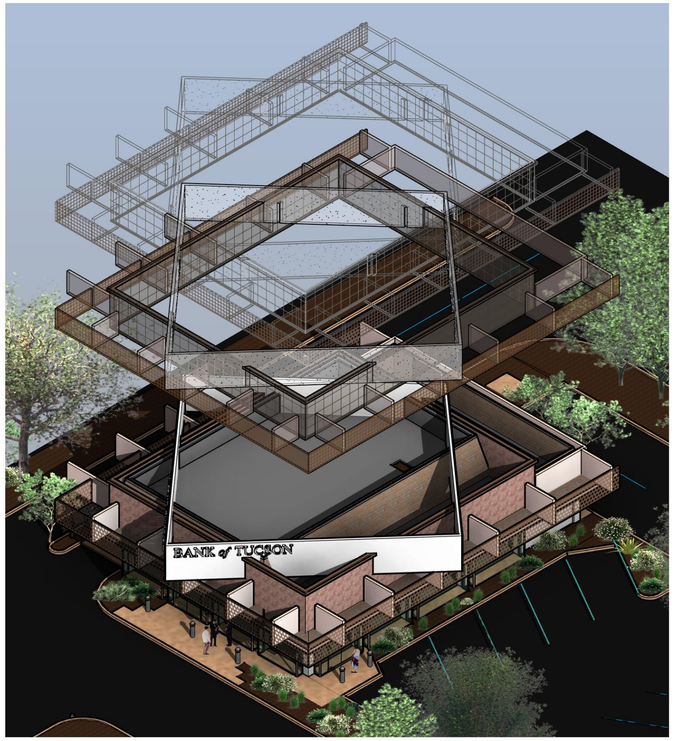
Practice Makes Perfect!

My Latest Presentation Using Autodesk® Revit® 2013



DESIGN CONCEPT

Existing Building

This presentation was created **solely utilizing** Autodesk Revit Architecture® 2013 and incorporates the following new powerful graphic features:

- Transparency Control for Individual Elements
- RPC Visibility in Realistic Views
- Sky & Image Backgrounds In All Views
- Gradient Background Underlay
- Multiple View Overlay Technique

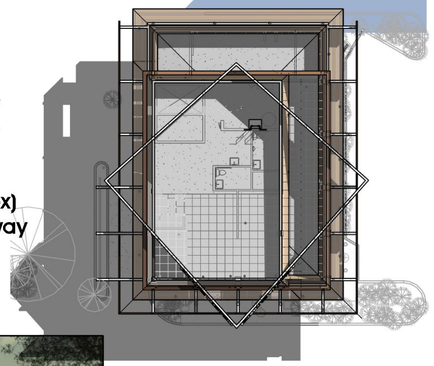
ELEVATIONS

EAST SOUTH

WEST NORTH

NEW BANK BRANCH

(Former Jack in the Box)
Camino Seco & Broadway



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Thank You!

Steven C. Shell

Architect

www.schell.com

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