



# **REVIT Level 2**

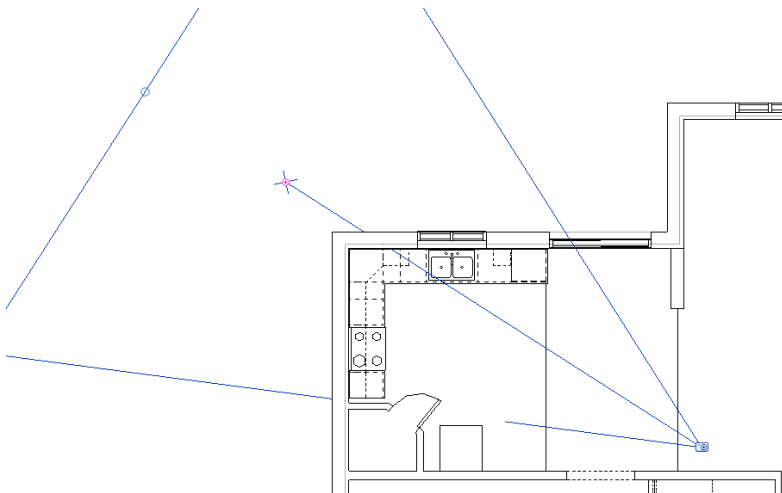
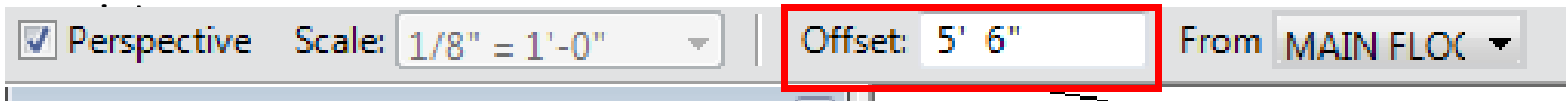
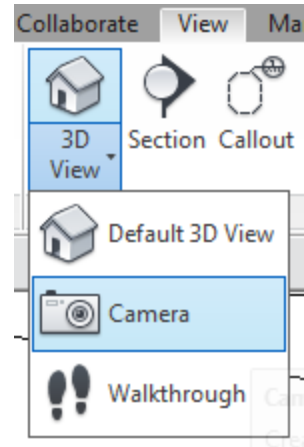
## **Session 01**

# AGENDA TODAY

- **Creating 3D views**
- **Understanding camera settings**
- **Introducing materials**
- **Using the Autodesk library**
- **Creating a new material**
- **Applying materials**
- **Creating a material with a BUMP texture.**
- **Creating a material with a CUTOUT feature.**

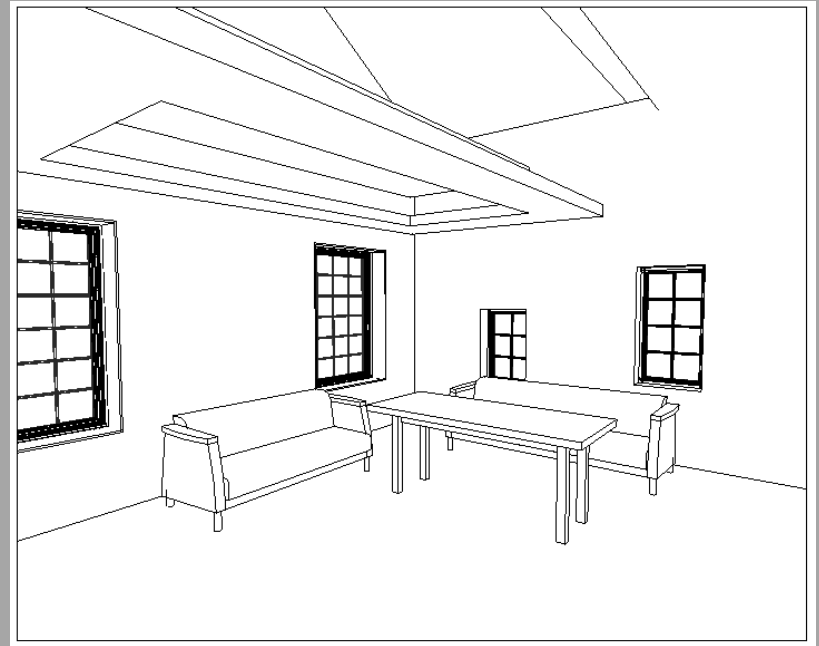
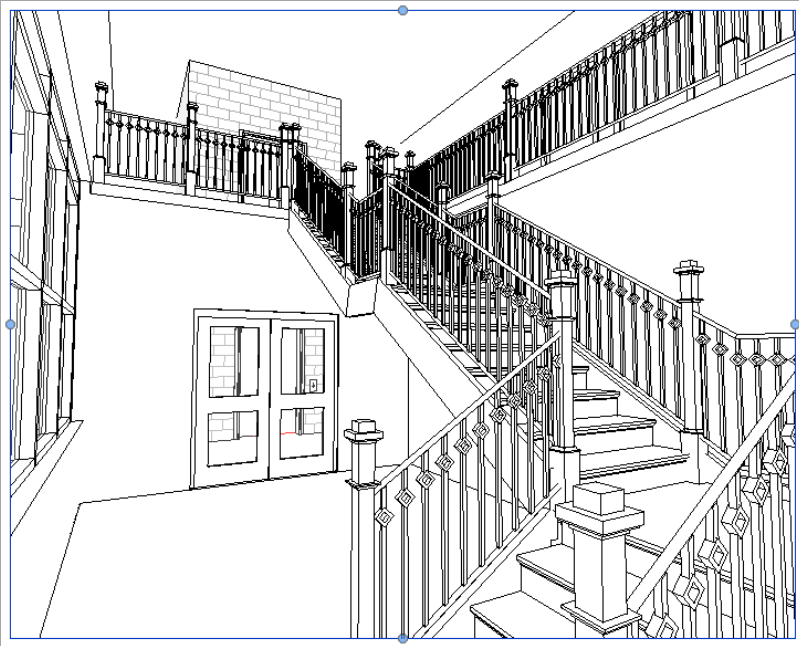
# Creating 3D views by inserting a Camera

- **Placing Camera**- You can place camera by activating it from your ribbon, View tab, Create panel. Click the small arrow near the 3D view, and click camera button on the drop down menu.
- Then you can define the camera by two clicks: the camera position and target position. Make sure to type in the “offset” height in the option bar which is simply the elevation of the camera and target



# Step 31- Adding Cameras

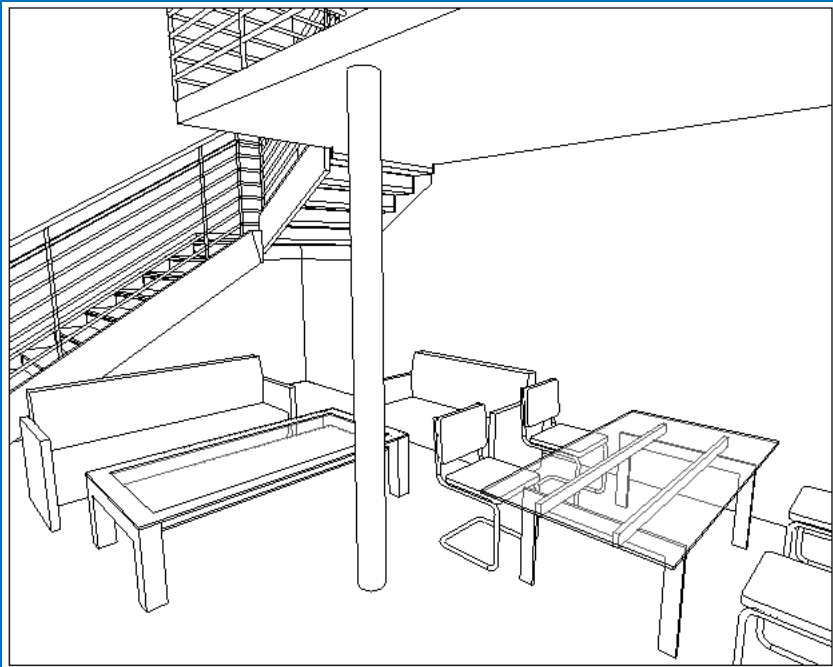
- Add these 2 camera views:
  - Front Entrance area
  - Camera 5'6- Target 7'0"
  - Crop size – 10"x 8"
- Waiting Area
  - Camera 5'6- Target 4'-0"
  - Crop size – 10"x 8"



# Step 18- Adding Cameras

- Add these 1 camera views:

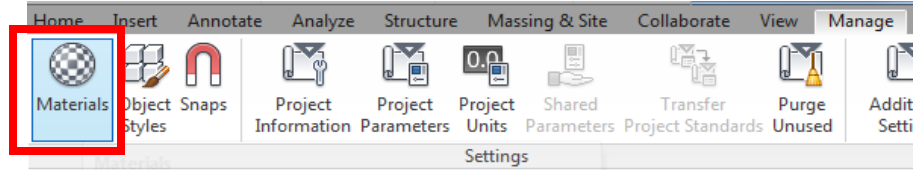
- Living room Area
- Camera 5'6- Target 5'6
- Crop size – 10"x 8"



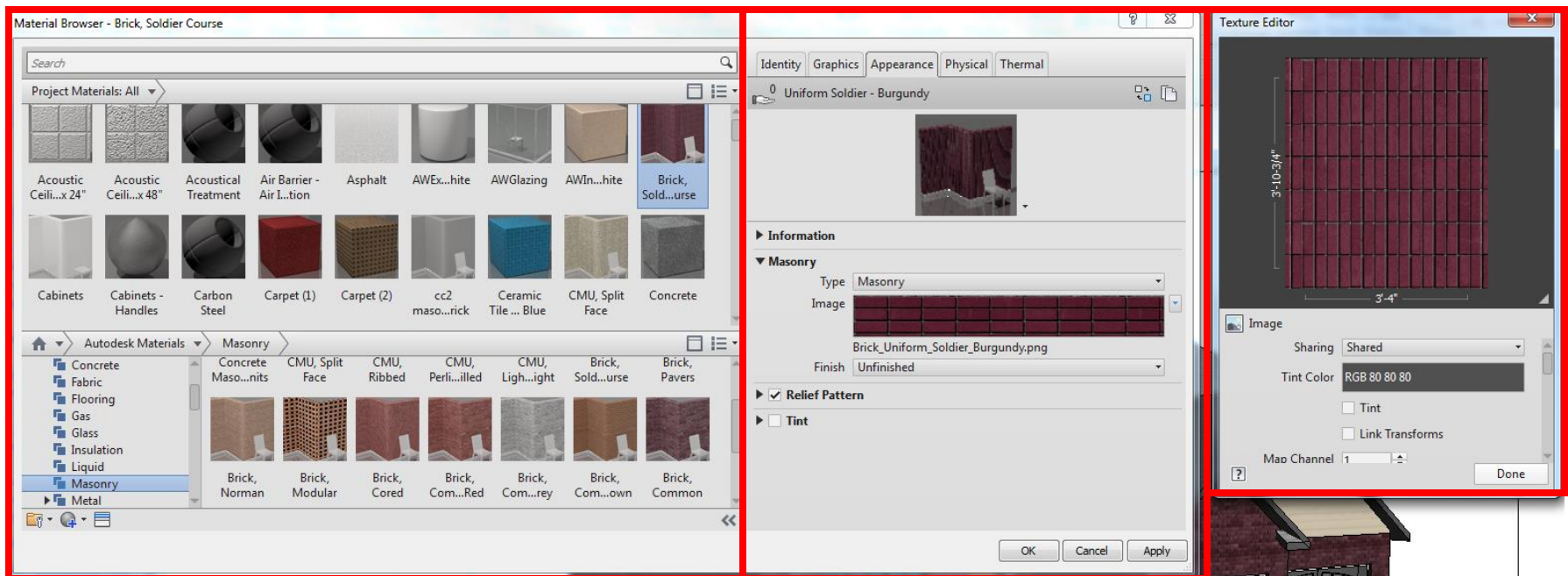
- Kitchen
- Camera 5'6- Target 4'-0"
- Crop size – 10"x 8"



# Introducing materials



- Materials specify how model elements should display in views and rendered images. They also provide descriptive and structural information. In Revit, you apply materials to elements in a building model in a project. You can also apply materials to elements when defining their families.
- The Material section in Revit is much the same as that in Autocad. It is divided into 3 control boxes: Material Browser; Material Editor (now part of browser); and texture editor.



# Step 32- Materials

- The following materials will be needed for this lecture:



MY back  
splash



MY Granite,  
Cut,...shed



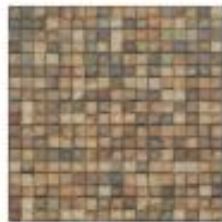
MY  
Mahogany



MY PAINT



MY Wood  
Flooring




BACK  
SPLASH.jpg



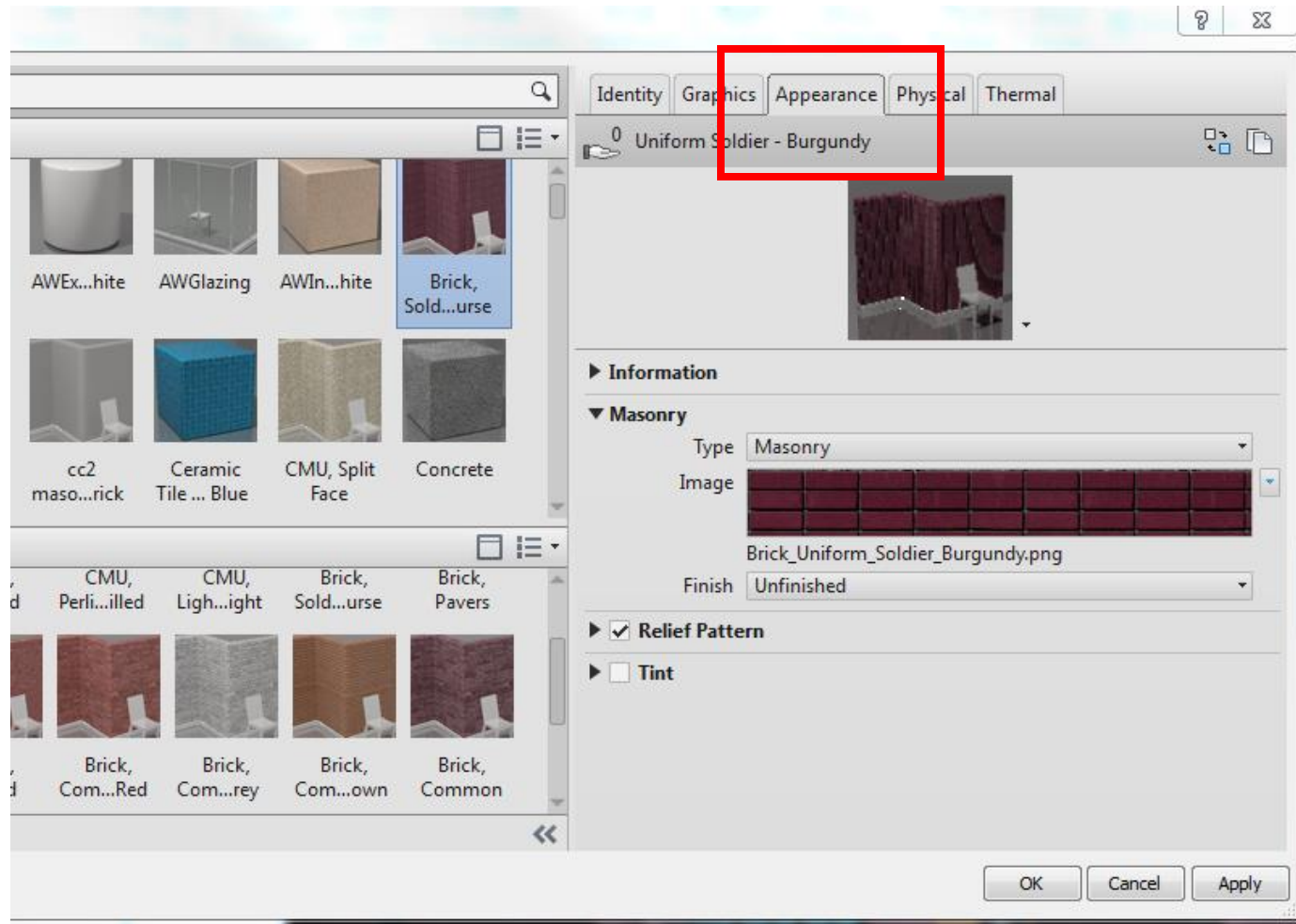
Dark-brown-hard  
wood-planks.jpg



# Creating a new material in the document material list

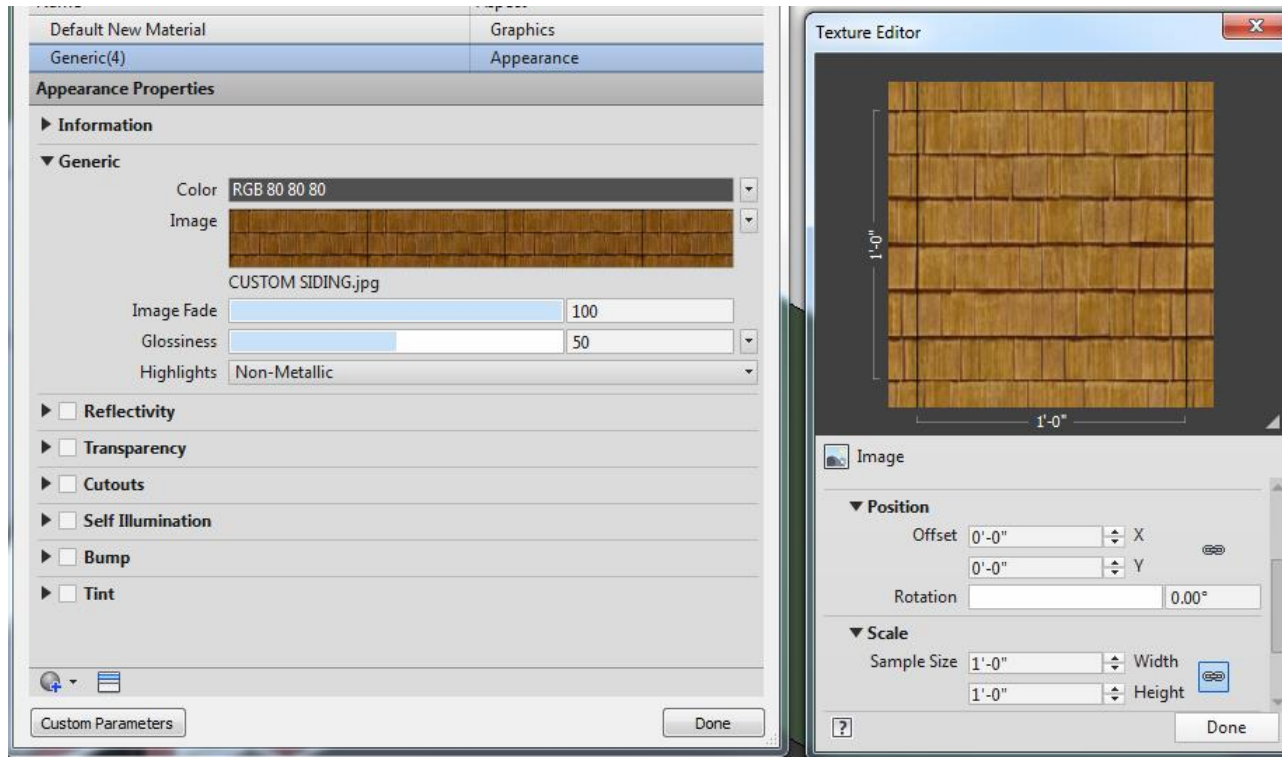
- You can add materials to your document material list in 2 ways:
- A) Use a material from the Autodesk material Libraries. Drag and drop the material into the project material list.
- B) Use the Create a new material button at the bottom left corner of the material browser.  This will create a blank material that you will have to set all the properties for.

# Editing the material “Appearance”



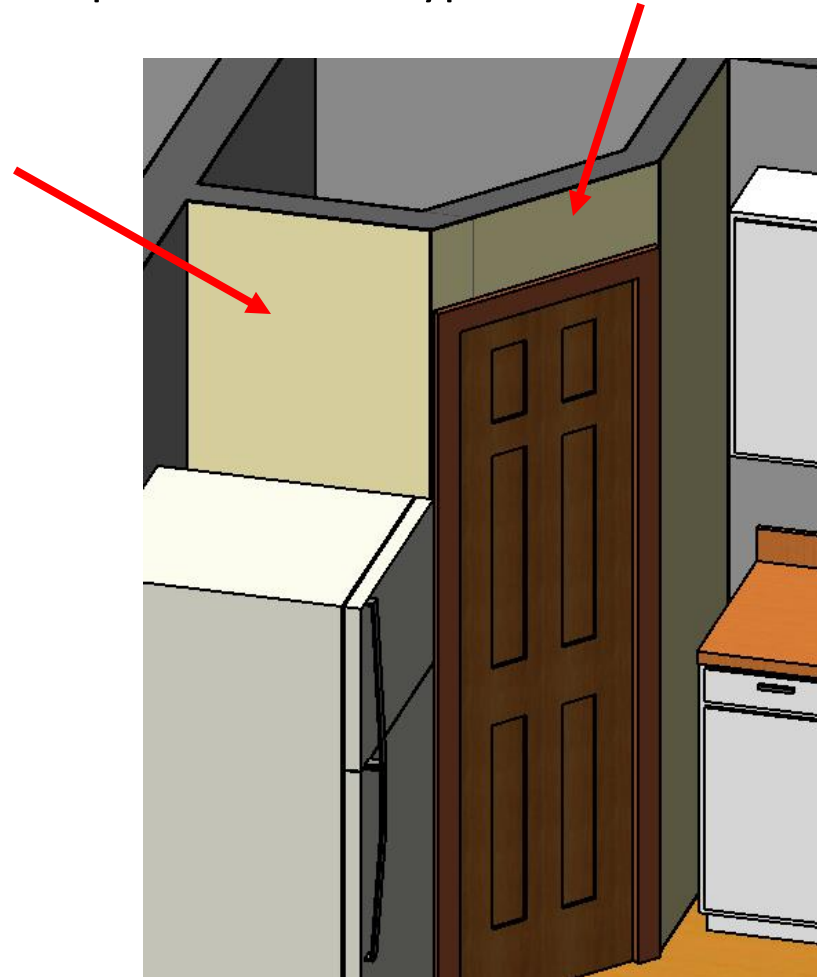
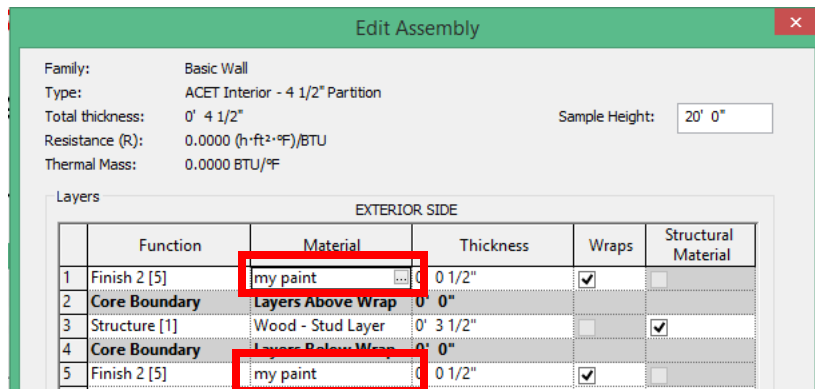
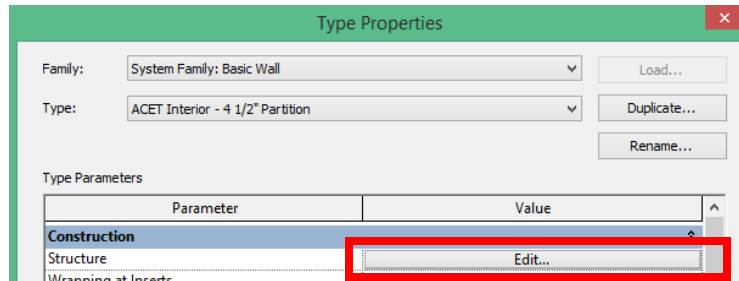
# Custom material

- Using other images other than those found in autocad.
- Choose 'generic' to create a material with a custom image.
- Under the Image box, select the no image selected text to choose an external image file of your choice.
- Advise: images taken from photographs are not the best type due to there non uniformal lighting.
- Goto Edit image- Texture editor to scale the pattern.
- You can also revise many different material properties.



# Applying material to Type- WALL

- Lets begin by assigning the wall a different material for the interior walls
- Select the wall and in the properties palette > Edit Type.



# Applying material to Type- Families

- Lets know change the materials on the counters and casework. Remember these are families that were used.
- Select each component and in the properties palette > Edit Type.

Type Properties

Family: Upper Cabinet-Single Door-Wall

Type: 18"

Load... Duplicate... Rename...

Type Parameters

Parameter	Value
<b>Construction</b>	
Construction Type	
<b>Materials and Finishes</b>	
Cabinet Material	MY Mahogany
Door/Drawer Material	MY Mahogany
Handle Material	Cabinets - Handles
Finish	

Type Properties

Family: Counter Top-L Shaped w Sink Hole

Type: 24" Depth

Load... Duplicate... Rename...

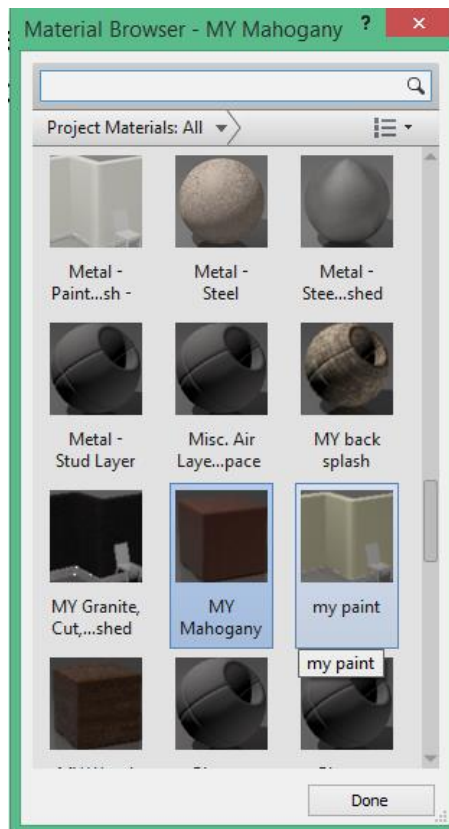
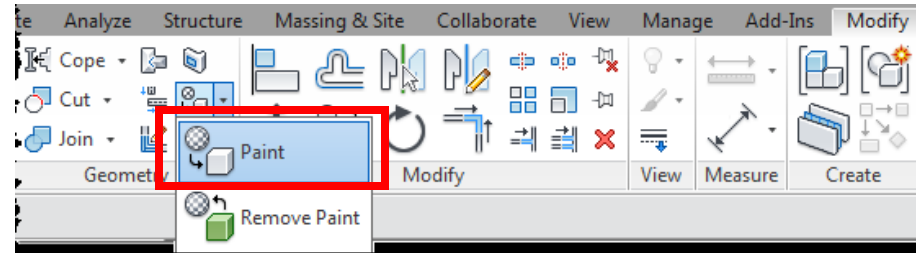
Type Parameters

Parameter	Value
<b>Construction</b>	
Construction Type	
<b>Materials and Finishes</b>	
Counter Top Material	MY Granite, Cut, Polished
Finish	



# Applying material to Faces

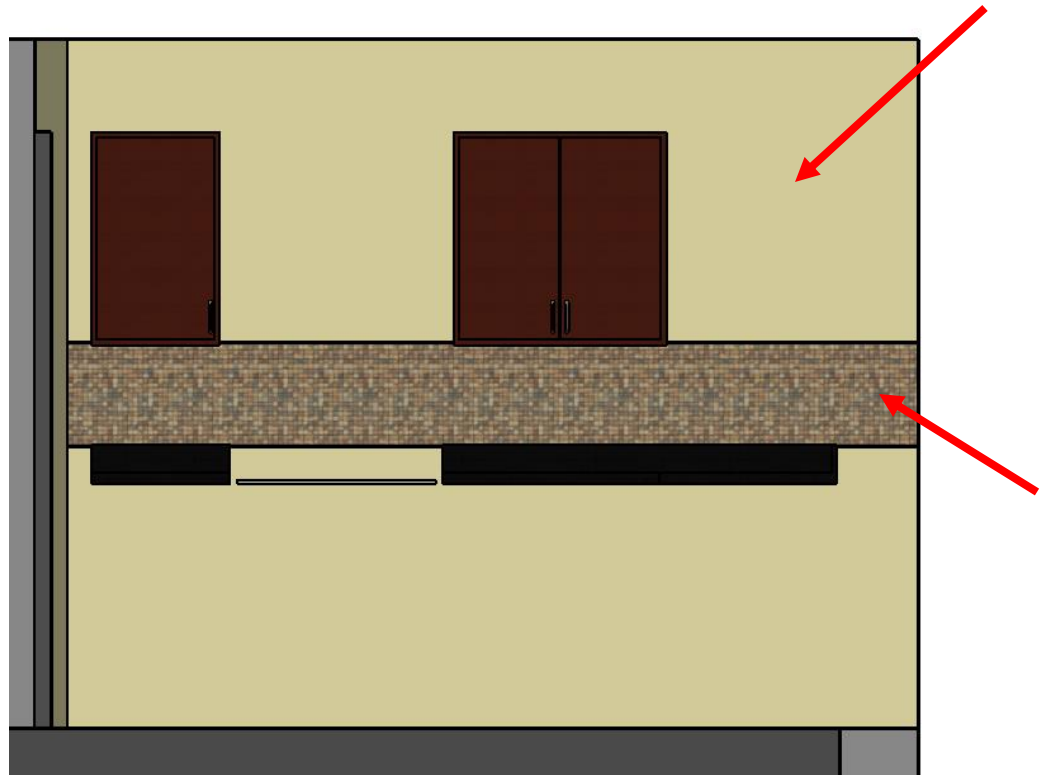
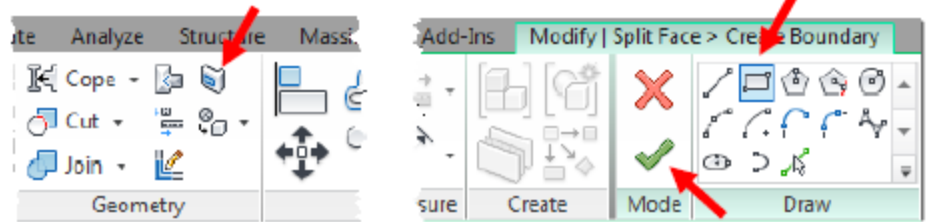
- Let's say I want to assign a different material to an individual face of an object... example, the exterior wall in the kitchen (but only that exterior wall). Use the Paint tool to apply a material to a single face only.



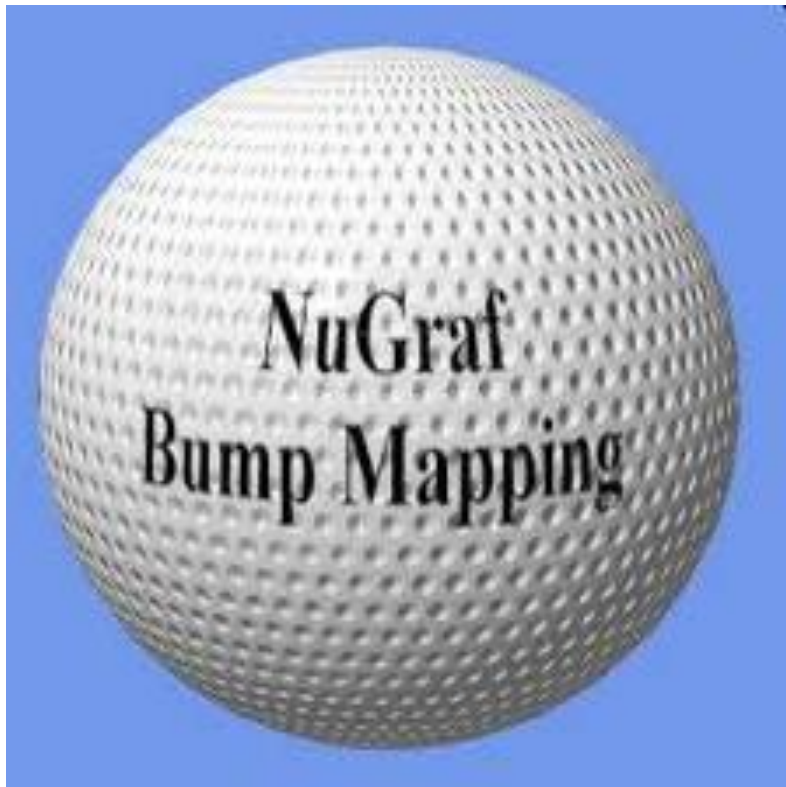
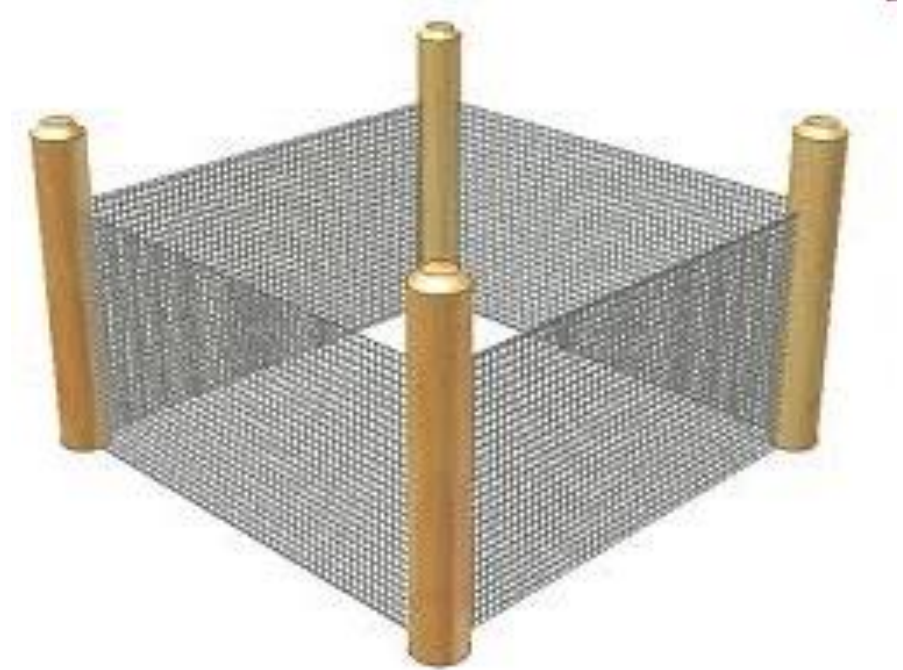
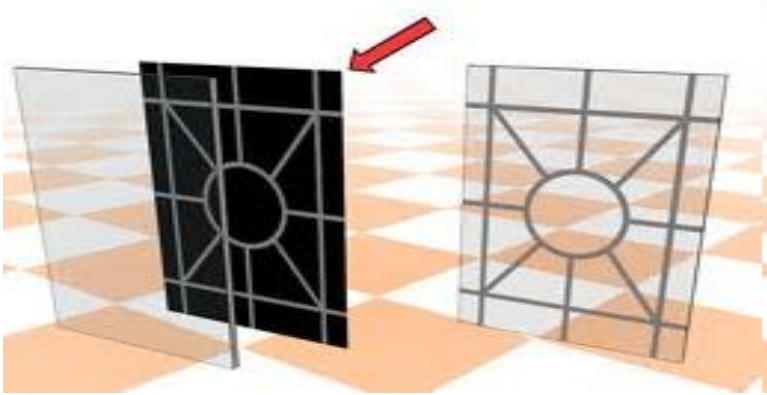


# Applying material to any Region of a Face

- Revit's **Split Face** Tool allows us to split the face of any wall, roof or floor into separate regions, enabling us to apply materials to each region independently
- a) Using the Split Face Tool:  
Modify > Geometry > Split Face
- • Within sketch mode, use the draw tools to define a boundary in the shape required
- • Pick to complete
- b) Use the Paint tool to apply the desired material to the new region



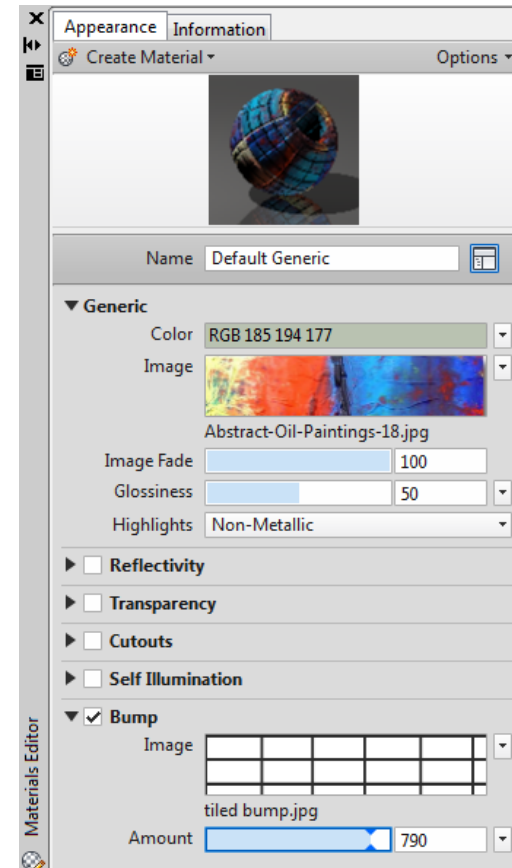
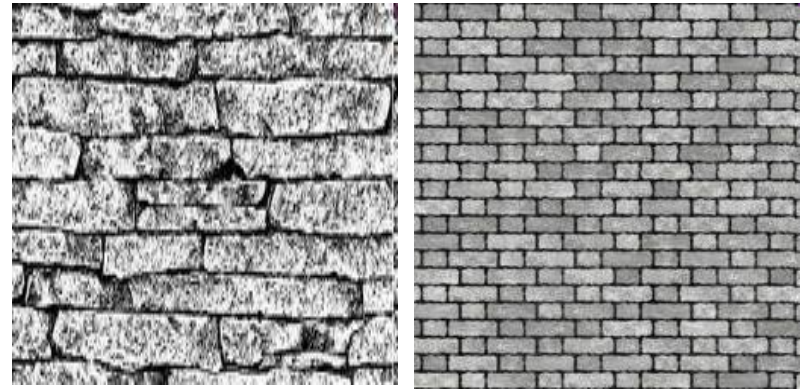
# Examples of bump and cut-out materials





# Bump features on material

- A bump map simulates a bumpy or irregular surface.
- You can select an image file or procedural maps to use for bump mapping. When you render an object with a bump-mapped material, lighter (whiter) areas of the map appear to be raised and darker (black) areas appear to be low. If the image is in color, the gray-scale value of each color is used. Bump mapping increases rendering time significantly but adds to the realism.
- Bump mapping uses the intensity of the map to affect the surface of the material. In this case, the intensity affects the apparent bumpiness of the surface: white areas protrude, and black areas recede.
- Use bump maps when you want to take the smoothness off a surface, or to create an embossed look. Keep in mind, however, that the depth effect of a bump map is limited. If you want extreme depth in a surface, you should use modeling techniques instead.
- The Bump map slider adjusts the degree of bumpiness. Higher values render as higher relief and negative values inverses the relief.
- You can also use a generic color or image along with a bump image .



# Cut out features in materials

- Cutouts maps make the material partially transparent.
- You can select an image file to use for cutouts mapping. Transparent areas are fully transparent.
- When you render an object with a cutout mapped material, lighter (whiter) areas of the map appear to be opaque and darker (black) areas appear to be transparent.

