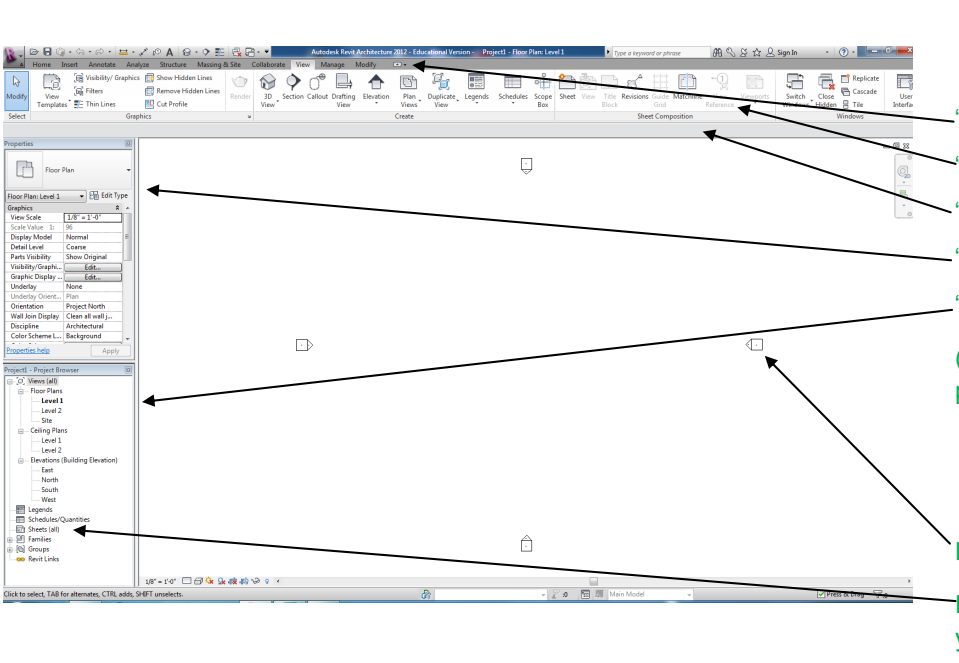
Revit Garage

Revit Interface



"4 cycles" of Ribbon Bar w/button.

"Ribbon Bar" in Revit.

"Option Bar" in Revit.

"Element Properties" in Revit.

"Project Browser" in Revit.

(If either or these two boxes disappear, go to *View—User Interface*.)

Don't delete the "cameramen".

Folders created automatically as you work.

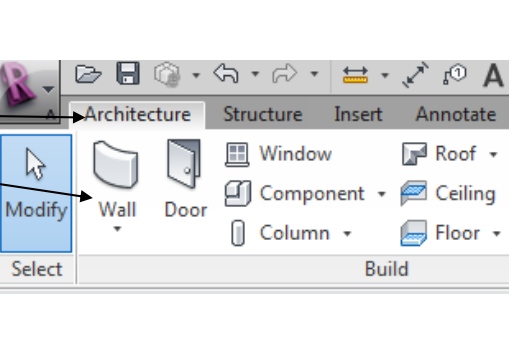
If prompted, choose Architecture Template.

Set scale to 1/4"=1'

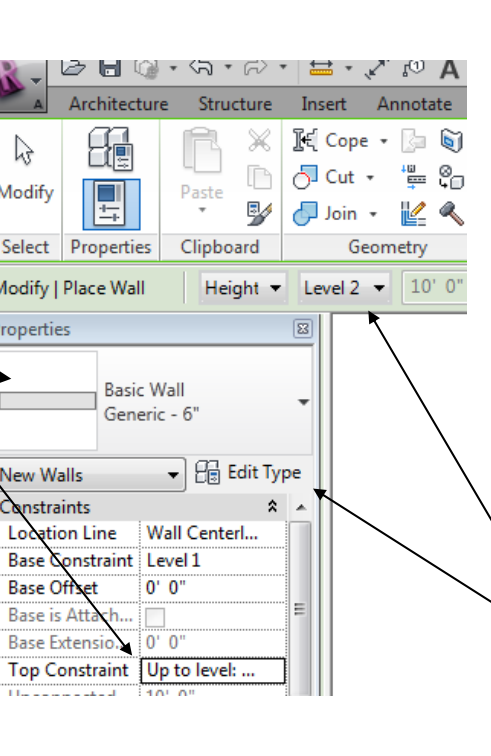
GLOBAL SCALE??

Scale not important until placement on sheets.

1 Exterior Walls



From the Architecture tab, choose Wall.



Choose Generic 6"

Set top constraint "Up to Level 2"

This is important! Just changing the wall height to 8' will cause problems later.

Big demo here:

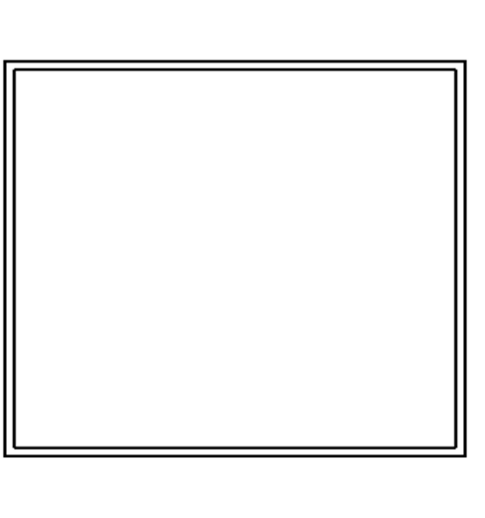
Show what happens with an unconstrained wall (20' height shown on Ribbon Bar)

SHOW IN 3D.

Properties: INSTANCE vs TYPE. This is HUGE!!! Instance is a one time change. Type changes everything. Use example of a window.

INSTANCE

TYPE



Sketch walls as shown. Don't worry too much about the size. Get "In the ball-park".

Big demo here:

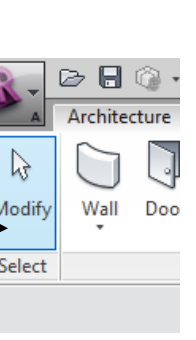
Show drawing walls, alignment guides, witness lines (in, out, center), cameras.

Default dim unit is FEET.

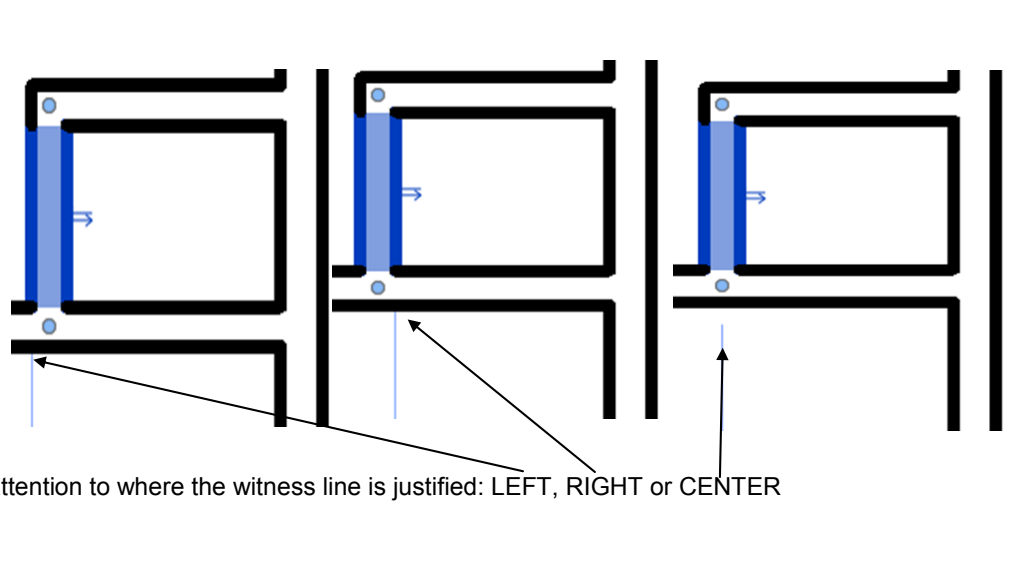
No feet marks

Space between feet and inches (9 6) = 9' 6"

Show *Modify—Trim*.



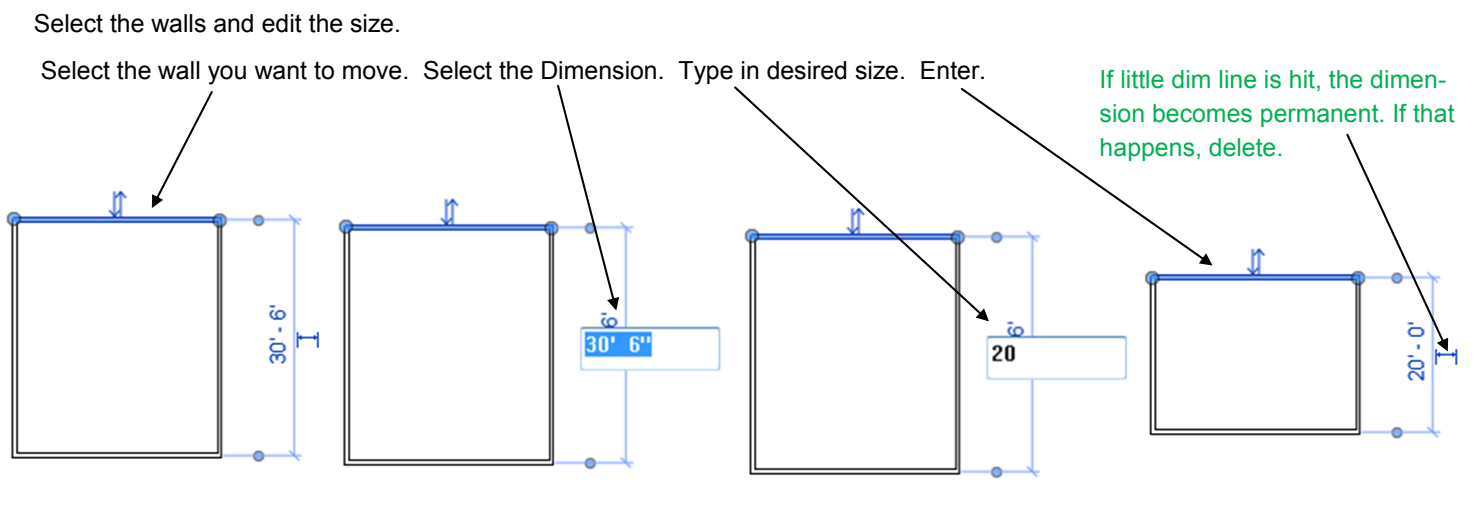
When done press escape. Choose Modify to edit wall sizes.



Pay close attention to where the witness line is justified: LEFT, RIGHT or CENTER

Select the walls and edit the size.

Select the wall you want to move. Select the Dimension. Type in desired size. Enter.

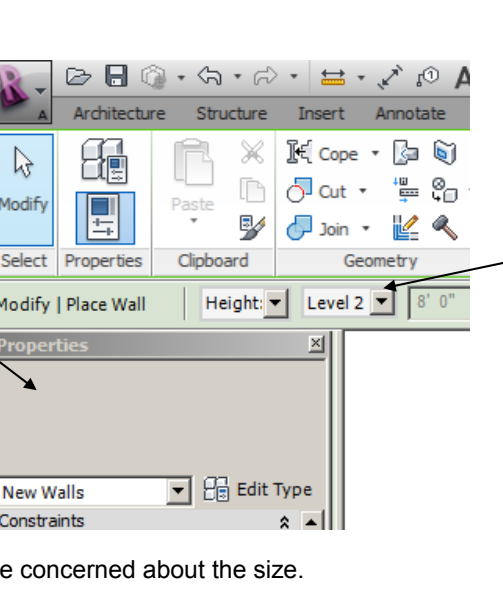


If little dim line is hit, the dimension becomes permanent. If that happens, delete.

This is a good time to look at the 3D view and demo the height (top constraint up to level 2).

Show example of a 20' wall in elevation and 3D.

2 Interior Walls



Select Wall, choose Basic Wall Generic – 4".

This wall type doesn't exist. You will need to—Edit Type—Duplicate—Rename.

Big demo here:

Make outside walls first, edit size, then make inside walls & edit.

Always show level on option bar, *height Level 2*.

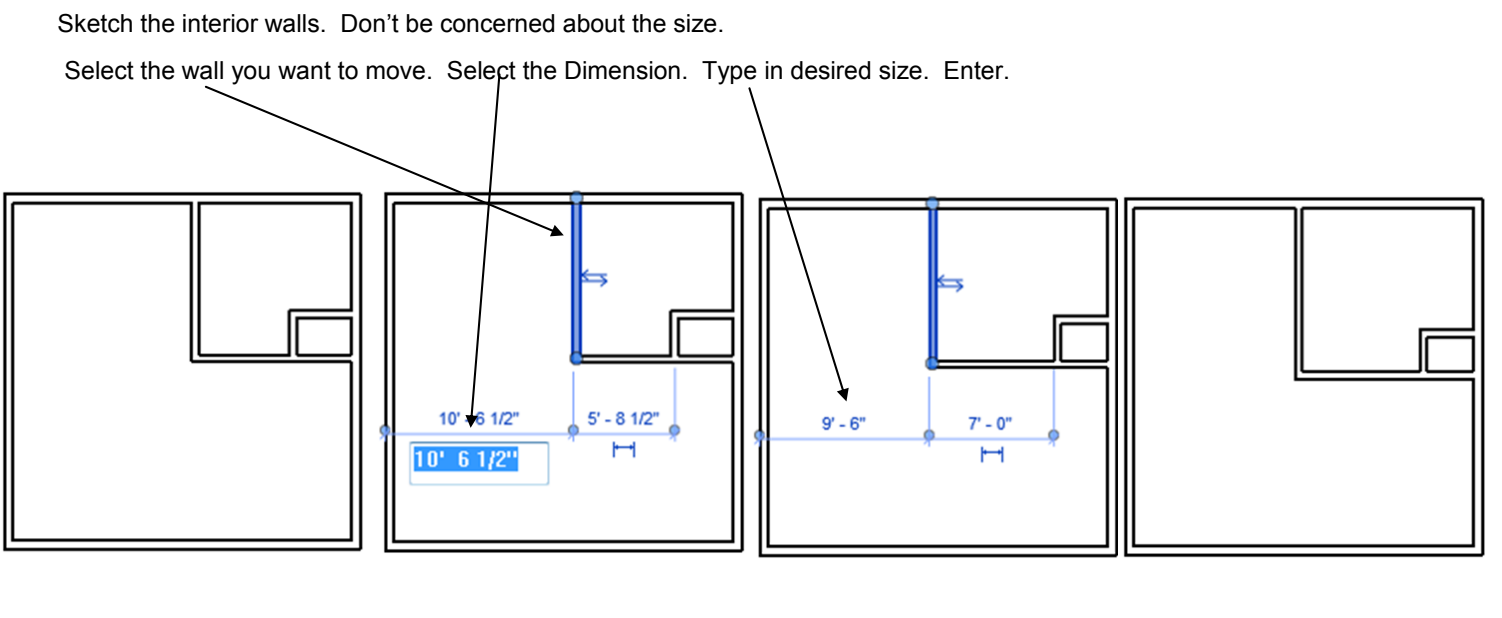
Show how to pick, drag and move witness lines.

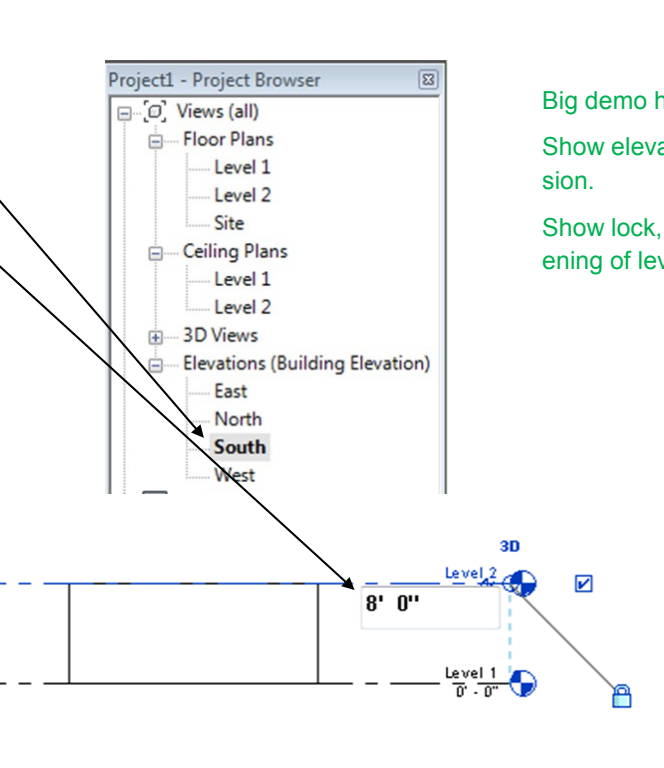
Also, how to move the wall itself using the "arrow" keys. Zoom in close for finer movement.

The highlighted wall will move.

Sketch the interior walls. Don't be concerned about the size.

Select the wall you want to move. Select the Dimension. Type in desired size. Enter.





Select the South elevation.

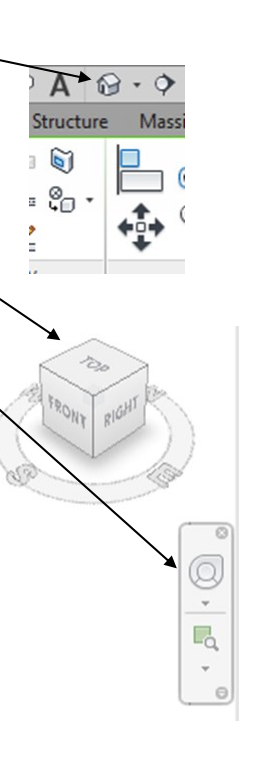
Select the dimension for Level 2.

Change the Level 2 height to 8'.

Big demo here:

Show elevation and Level 2 dimension.

Show lock, unlock, aligning and shortening of level lines.



Select the 3D icon (it looks like a little house).

Use the "View Cube"

And the "Steering Wheel"

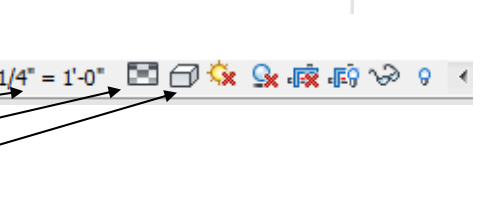
To manipulate the view

of the garage.

Big demo here:

View manipulation.

Right click then "Go Home" if view cube gets locked.



The Display Bar is in the lower left corner of the screen. It includes:

Scale

Detail Level

Visual Style

Big demo here:

Detail level is not very useful until you have smart walls.

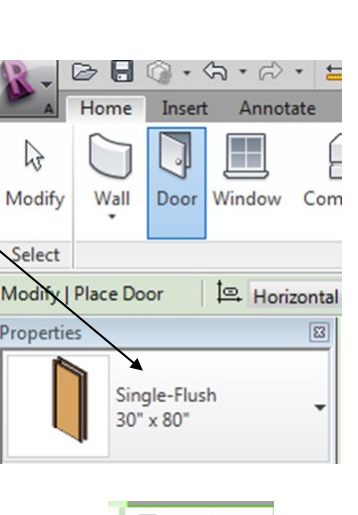
Show Visual Style options.

Show in 3D.

Double check scale.

NO GLOBAL SCALE!!!

3 Doors

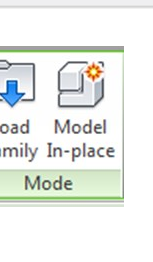


Back to Floor Plan Level 1.

Architecture. Door. Change Element Type. Notice all single flush doors with various sizes. Great, but what if you want a different type door?

Big demo here:

Explain "families". Why not load everything? More than you need, slows computer down.



Load Family.

Imperial library folder. See all the content?

Doors folder.

Let's grab a front door: single decorative2

A garage door overhead sectional.

Openings folder.

An opening: Passage opening cased.

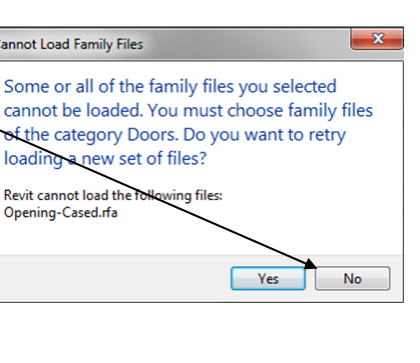
Hold down the control key and select them. Open.

(If it fails to load the cased opening, say NO to retry)

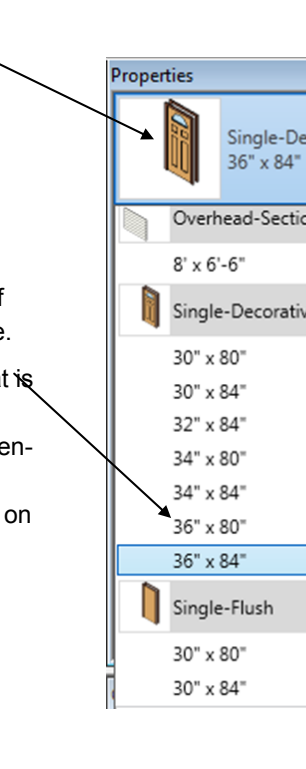
Make sure you get **both objects**!!

Don't open more than a few at a time. Too many can crash the computer.

May have to load separately since now in multiple folders.



The "passage opening cased" will not load with doors. It must be loaded under "components".



Each of these door types are called a "Family". Each family has a set of preselected sizes attached to the door type. You can set your own sizes at any time, or modify the sizes that were preselected. But it must be done correctly!

Now try the selector. Notice each family has a bunch of size choices, again, you can make your own at any time.

Let's start with a nice front door. Single decorative2 that is 36 in. by 80 in. Put the door into the back wall near the bathroom. Anywhere in that corner area. Note the dimensions above in blue. Make it 5 ft. 6 in. from the left wall. Enter. Now switch the swing of the door, so the door is on the right and swinging into the garage. Notice options. Escape twice to exit the command.

Big demo here:

Show door insertion. Demo swing change.

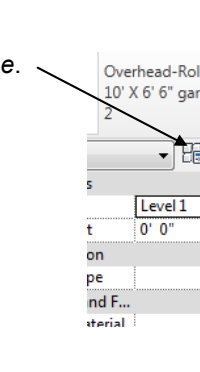
Temporary dimension.

Show witness line on door.

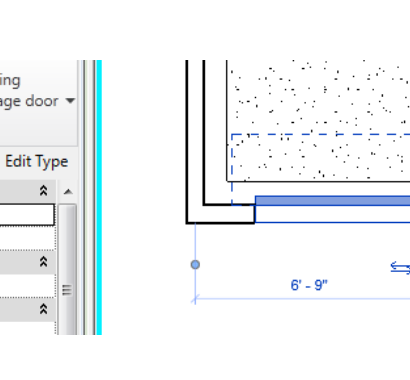
Huge demo here, show custom sizing:

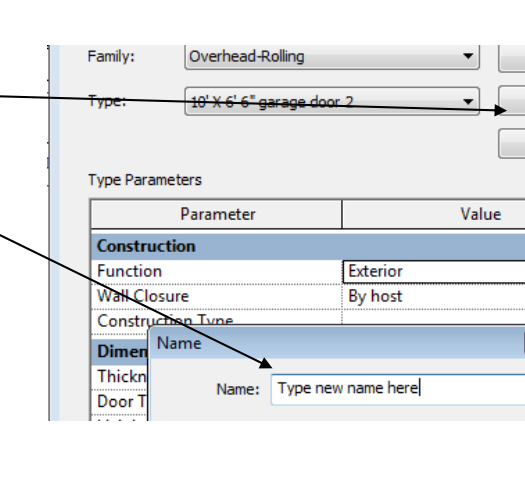
This would be a good spot to change the size of the garage door. Make a duplicate garage door, re-name it and make the size 10' 0" X 7' 0".

Never change sizes, these are TYPE properties. A change on one door will change all doors!



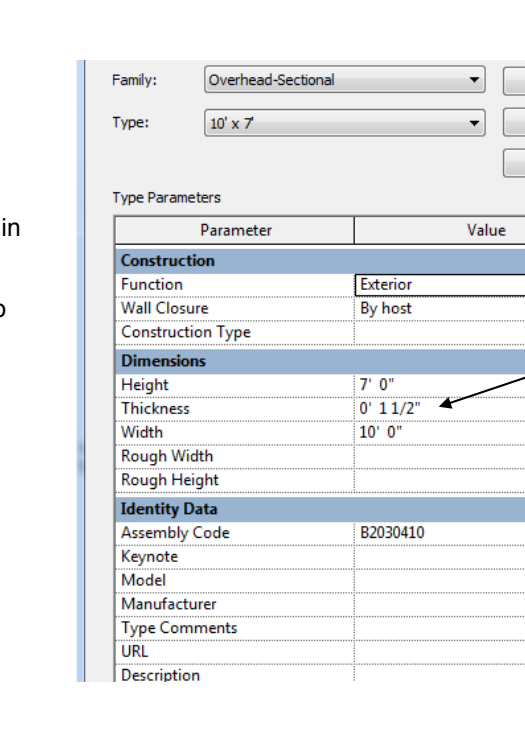
Select door then pick *Edit Type*.





Select *Duplicate*.

Rename door.

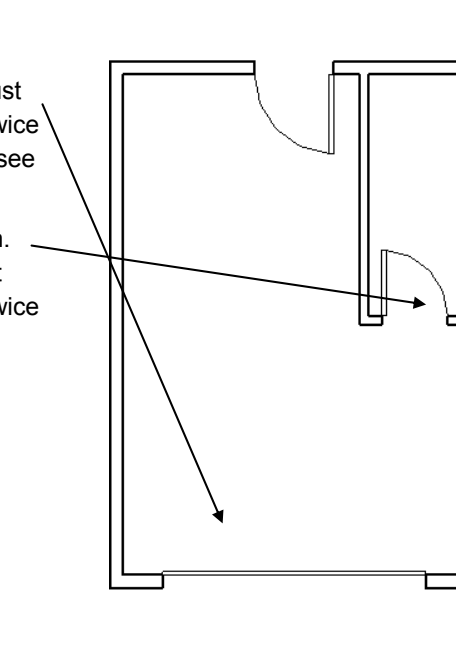


Change any sizes or properties.

The new name will now show up in your list of doors.

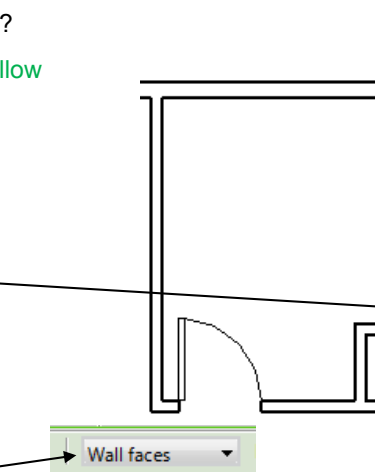
By changing a "duplicate", you do not change anything else in the "family".

Change height to 7' and width to 10'.



Add the garage door, 10 ft. by 7 ft. on the front wall. Adjust the door location according to the dimensions. Escape twice to exit. Pass your mouse over the garage door. Do you see the box with the description of the door?

Add the bathroom door, Single flush that is 30 in. by 80 in. Put the door anywhere on the wall with the closet. Adjust the door location according to the dimensions. Escape twice to exit



Add an opening.

Architecture

Component

Load Family. Imperial library folder. See all the content?

(The cased opening should already be loaded. If not, follow the next step.)

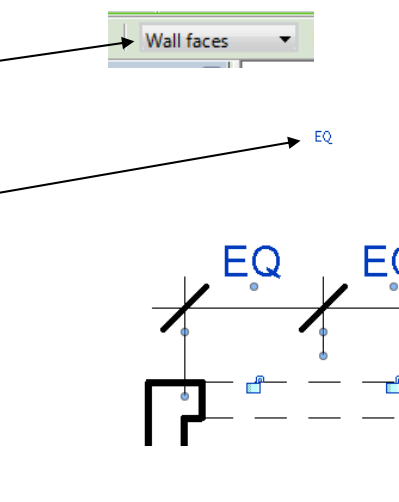
Openings folder. Passage Opening-cased. Open.

Place a Component.

Opening Cased 34X80

ESC….ESC

Cased opening not really a door. Revit just put it in the doors folder. (component in 2013)



Choose Annotate tab, then Aligned Dimension.

Set to Wall Faces (on options bar).

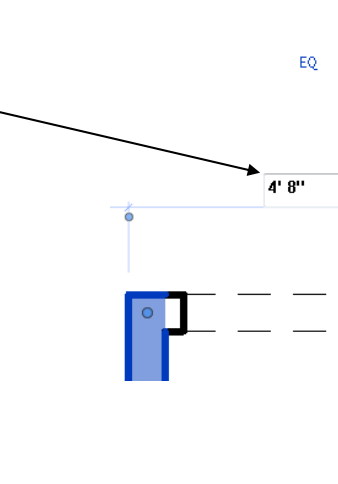
Pick and drag dimensions from wall face to center of opening to wall face.

Escape X2 then select dim line.

Pick the EQ

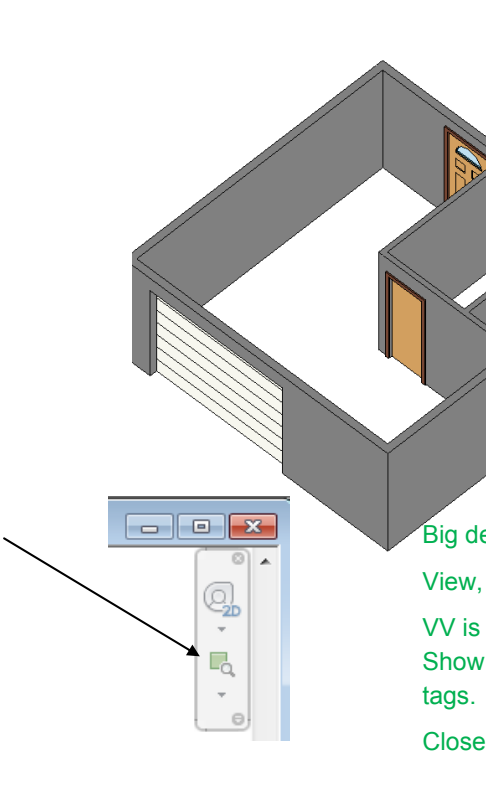
to make these sizes equal.

The cased opening will be too big for this wall. Show how to center the cased opening, then make the wall 4" bigger. The cased opening should stay centered.



If closet is not big enough for the opening size. Make the wall 4" bigger.

Show the right click on view cube—Go Home again.

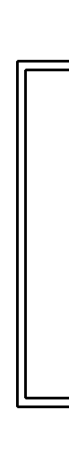


How's the garage door look? Especially the height.

Check out the doors in 3-D view.

Check out the model by using Orbit tool on the Steering Wheel and move your mouse to spin the model!

Esc….ESC



View.

Tile. (top, right corner area)

See the drawings that have been created.

Show Navigation bar with Zoom Tool (top right corner of any tiled window)

Zoom all to fit

Maximize a window

Show "Switch Windows"…allowing you to quickly cycle between open views.

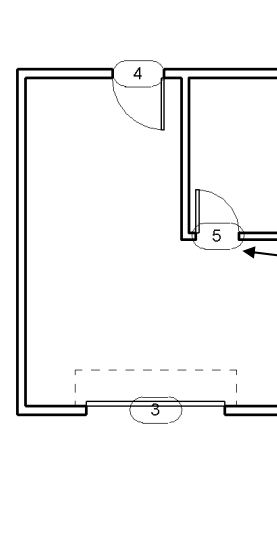
Show CNTL-TAB Cycling through views technique

Big demo here:

View, Tile, etc.

VV is your main visibility box. Show how to turn off window tags.

Close 2 or more, re-tile.



You have learned to load a family, control the location of an object with temporary dimensions and witness lines, and rotate the 3D model.

Save as **CHS/PV Revit Garage**

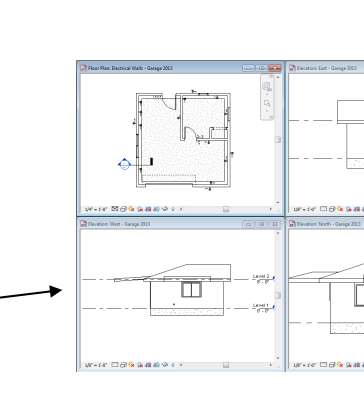
Can we turn off these symbol?

Pick the door tag then type VH (view hide)

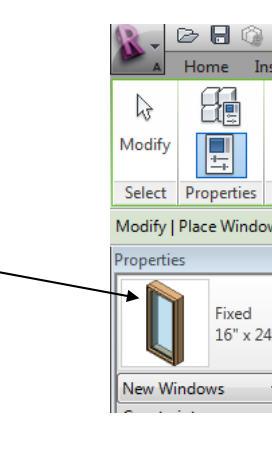
Must type VV to get it back.

They don't show up automatically in 2013. To turn them on:—Arch—Tag Area—Tag all not tagged—door & window.

4 Windows



Set view with Floor Plan, North, East and West Elevations. Then *Tile*.



Click on Floor Plan Level 1. Plan view.

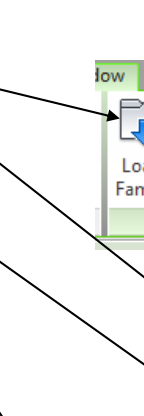
Architecture

Window.

Notice that in the Change Element Type, fixed is your only choice. Let's get a variety of windows from the library. It's the same process, we used when we got the doors.

What about constraints? Should the top be 6' 8"? Demo small window.

May want to show how to lock a wall so the size can't be changed.



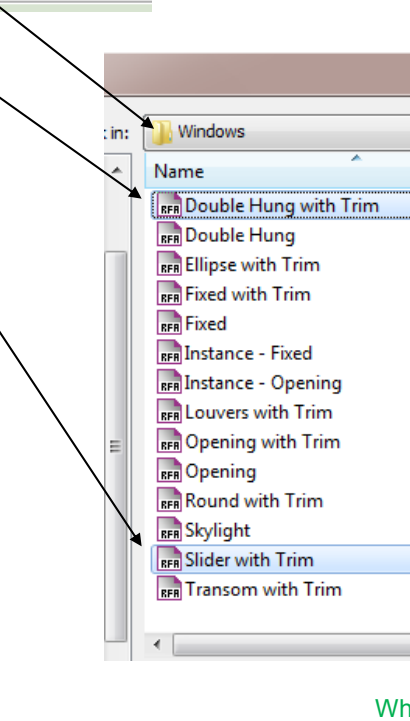
Load Family. Windows folder.

Get the: *Slider with trim*.

Double hung with trim

Louvers with trim

Open.



Windows

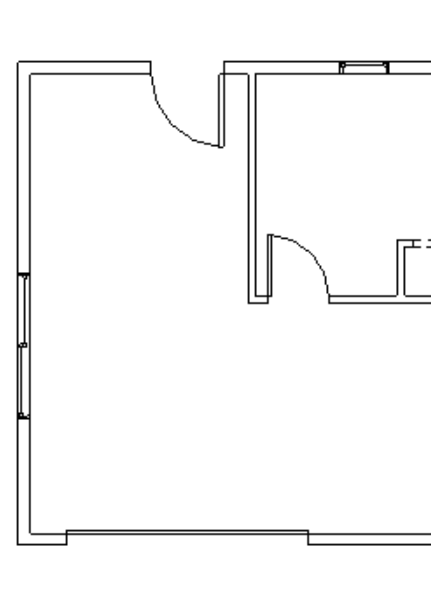
Name

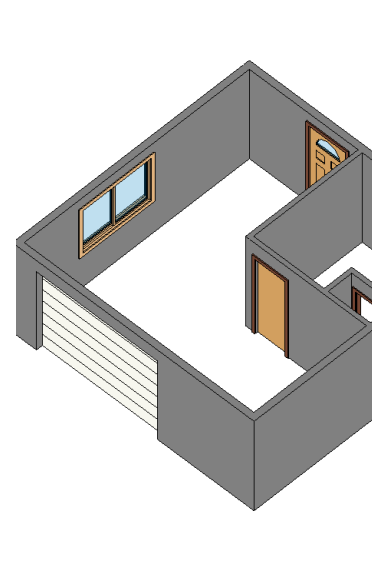
- Double Hung with Trim
- Double Hung
- Ellipse with Trim
- Fixed with Trim
- Fixed
- Instance - Fixed
- Instance - Opening
- Louvers with Trim
- Opening with Trim
- Opening
- Round with Trim
- Skylight
- Slider with Trim
- Transom with Trim

Now the three additional Window family's are added to your selector.

Note: Windows and doors are "Wall based Families". They can only be placed in a wall. The wall "hosts" (Revit term) the doors and windows.

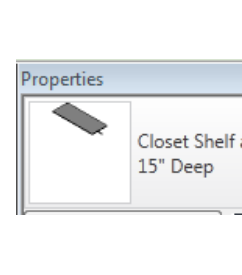
Let's put the three different windows in the garage as shown on the plan. Just put them on the wall anywhere! Adjust the window locations according to the dimensions on the plan. Escape twice to exit. Notice they leave different Window tags.





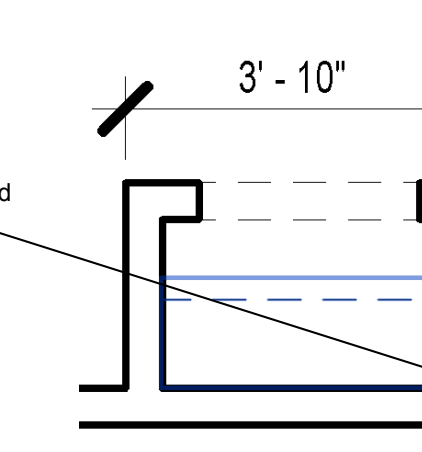
What about custom window sizes? Same as doors. (Edit Type & Duplicate).

Discuss issues with this "family". Head height of 7' seems to measure to the top of the trim. True head height should be 6' 8". Don't change it, just explain.

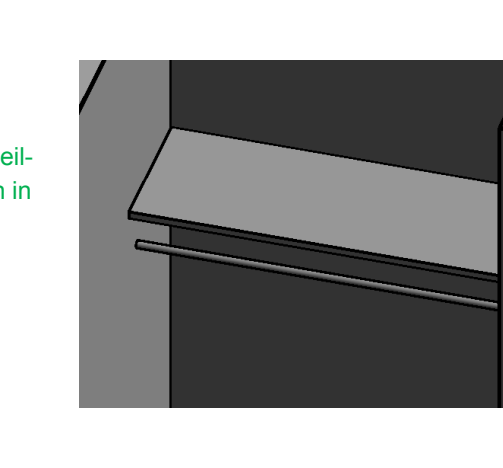


To add a shelf & pole in the closets, go to component—load family—shelf & pole (specify location of file).

Not sure where this section should be placed. Maybe between Dim and Elect. (It worked in a 3D view, pick the corner of the walls' floor, left side first.)



In Floor Plan Level 1, pick the start and end point of the shelf & pole. (left side first)



This is what it should look like. (the roof, ceiling, wall, door and light fixtures are hidden in this view)

Instructor's ✓ 1