Lesson 18

The Focus of this Lesson is:

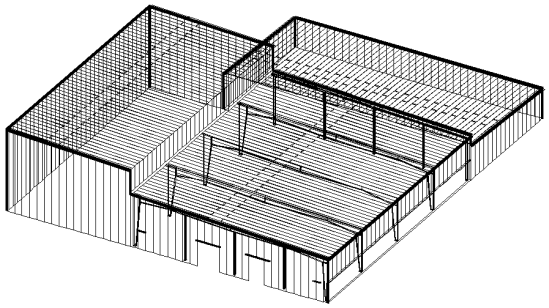
- **Add existing buildings to your projects**
- **Check loading**
- **Check and change trim types**
- **See the parts that are detailed**

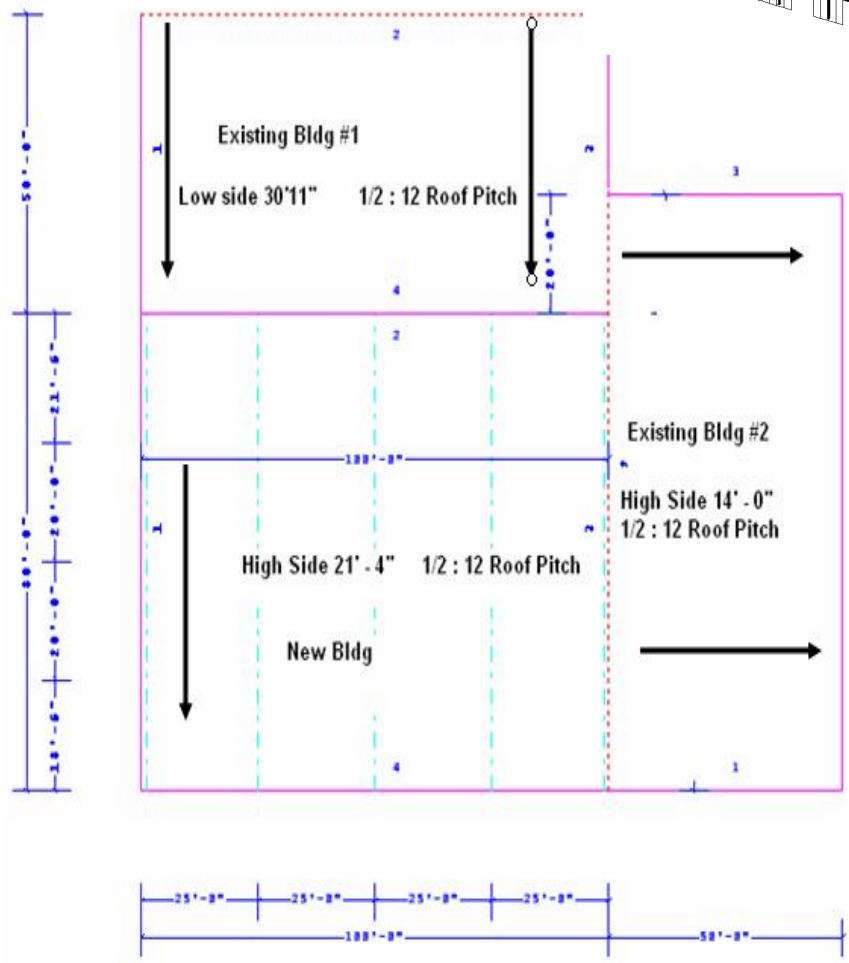
Lesson Comments:

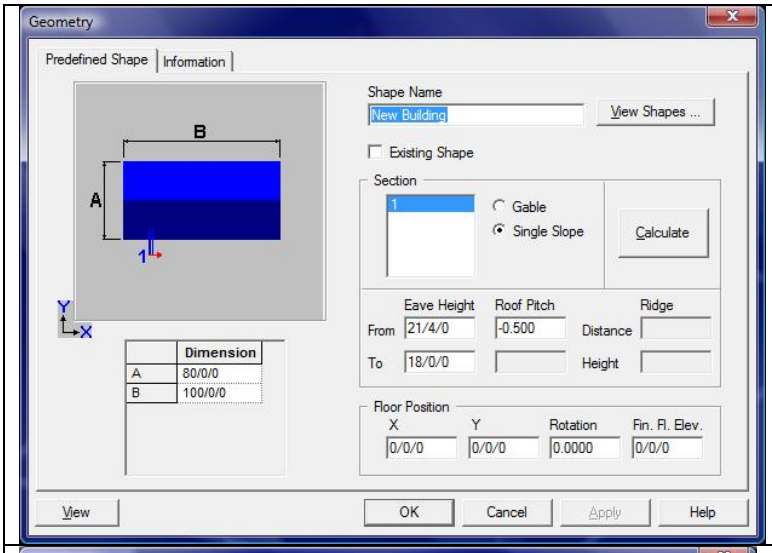
In this lesson we will add existing buildings to our new building so that loads get transferred and trim conditions get detailed. We will look at how you can check to see exactly what parts you are getting on your project.

Existing Buildings around your job can impact the loading that your new building will receive. Any Buildings placed in VPCommand within 20'-0" of each other will apply loads to the other buildings.

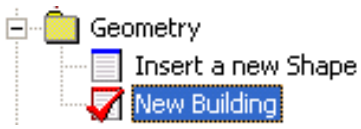
Use SSR roof and Panel Rib walls. Eave Gutter and Base Trim w/Angle. Your loads and codes from your default buildina



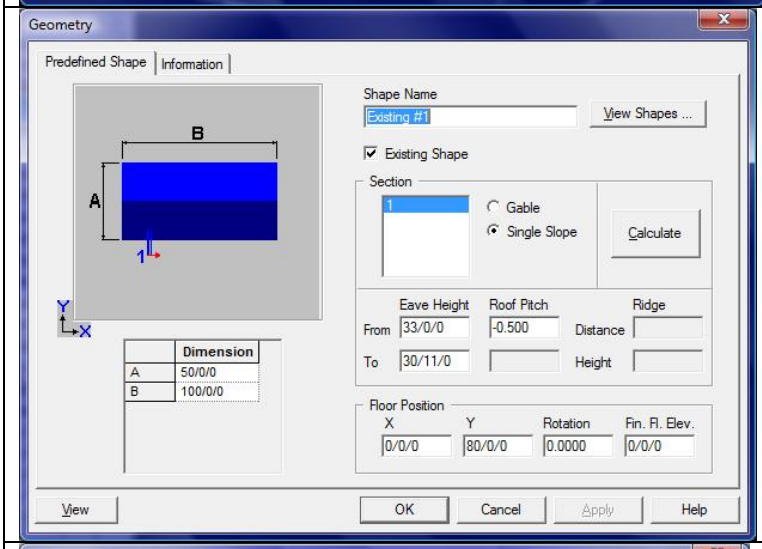




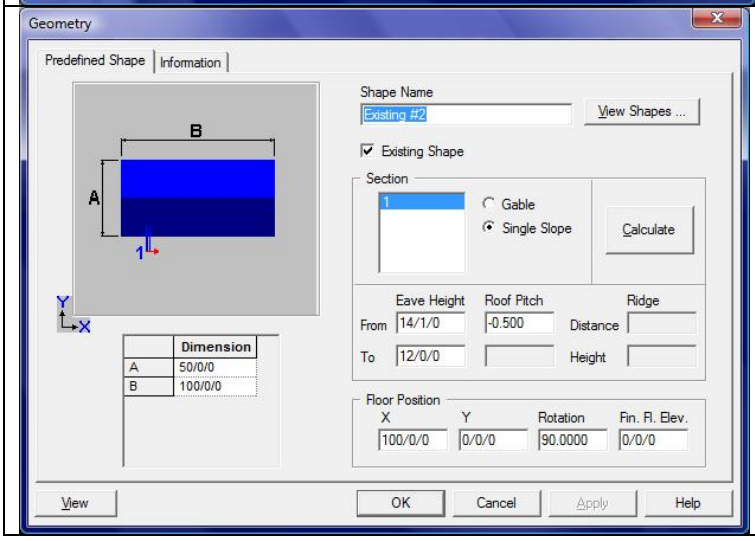
1) Input the Buildings
   - You could start with any one of the buildings just as long as you can locate them in the correct x-y location.
   - For this lesson we can start with the New Building and locate the existing buildings around it.
2)



3)

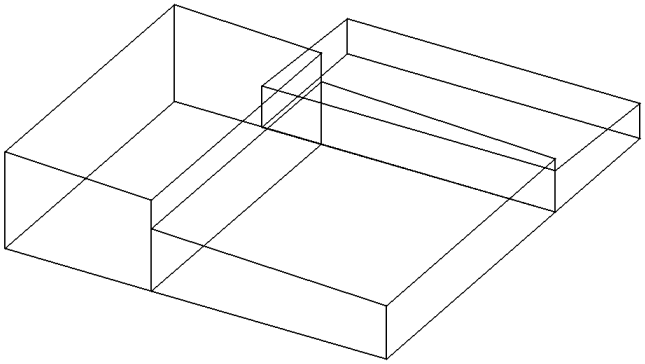


4) After you enter the New Building, you can add the existing buildings around it.
5) Open the Geometry folder.
6) Double click Insert a New Shape.
7) Define Existing 1 as shown here.

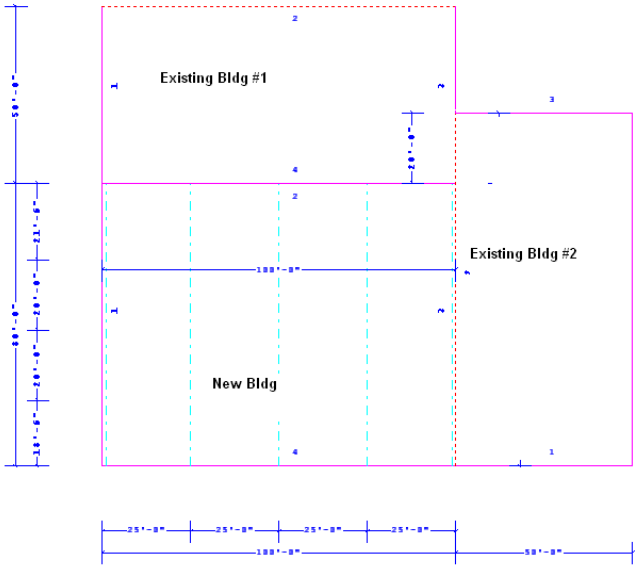


8) Define Existing 2 as shown here.
9) Make sure to click the Existing Shape Check box.

Note: Discussion of the significance of the Existing Shape checkbox will be explained later.

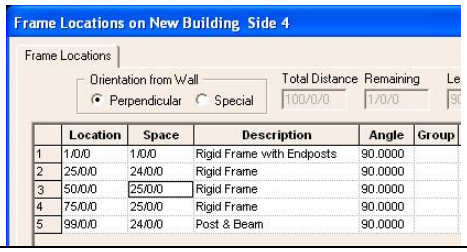


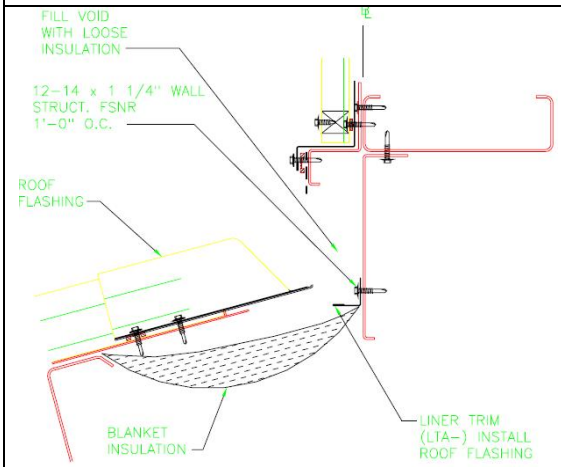
10) Your building should look similar to the following. The existing buildings are located on the back sidewall and the right endwall of the New building. Remember that the left most point (least "X" and least "Y" value) of any shape is its origin and that it is subject to change as the building is rotated.



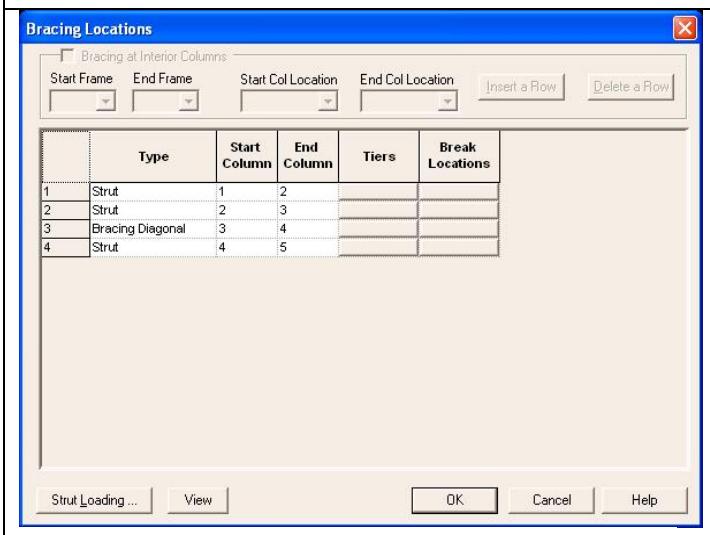
11) Add centerline of Frame Locations

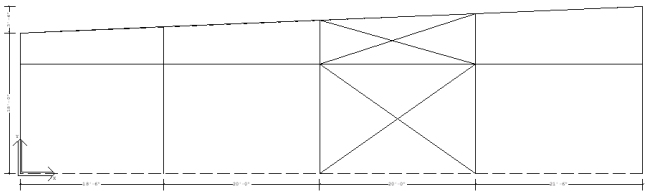
- <u>New Building</u>: For this example we can use 25'-0" bays in the New Building.
- The left endwall frame should be a rigid frame with endposts due to the framed openings that are required.
- Keep in mind that the right endwall frame can be a post and beam if we add endwall bracing.
  - Look for this in a step later in the lesson.





- <u>Existing Building #1</u>: Because the low side of Existing Building #1 is higher than the low eave of the New Building there will be a need for Wall to Roof flashing between the 2 buildings.
- Because we have input the existing buildings, VPCommand will recognize the condition and add this trim.

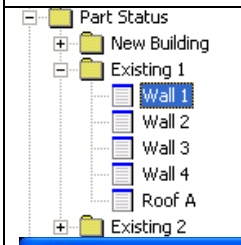


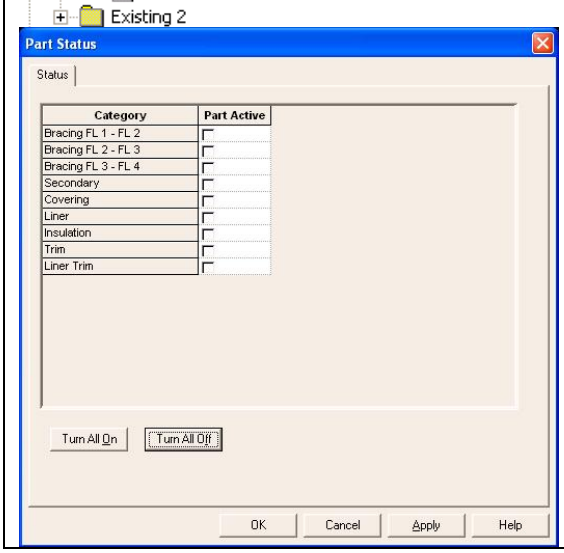


12) End wall Bracing
- Since we used a Post and Beam frame on the Right end wall, and the wall is open below the high eave of Existing #2, you will need to add end wall bracing.
- You add the bracing to the end wall just as you do a side wall by changing the Strut to Diagonal Bracing.

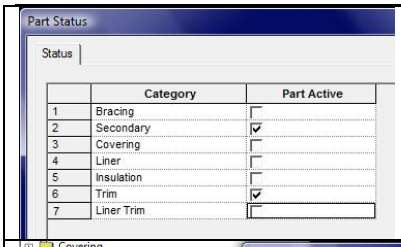
13) We added existing buildings to our New Building so that tie in trim conditions would price and any snowbuild up or other loads could get transferred correctly. Now we need to ensure that the secondary, framing, trim, covering, etc. at the existing buildings do not price unless we want them to.

14) Identify any items on the existing buildings that you may need.
- Trim Wall to Roof condition on wall 3 of the New Building.

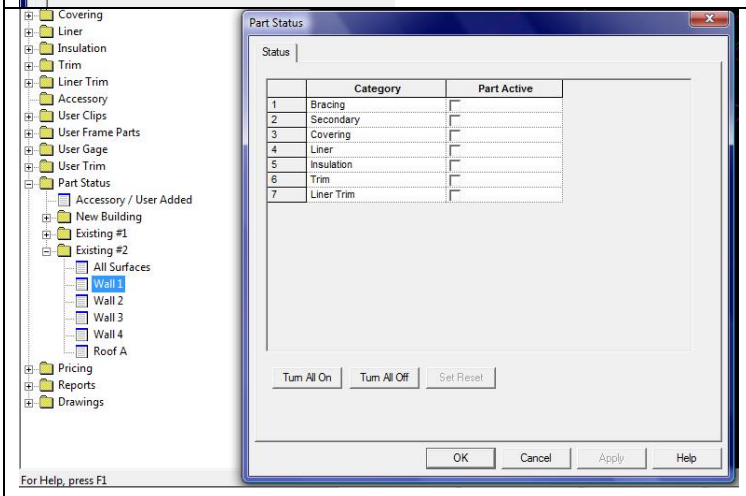




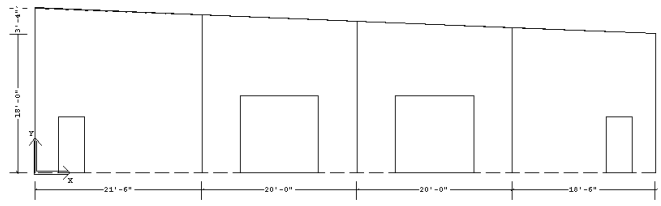
15) Go to the Parts Status folder in the tree for Existing #1 and Turn All Off for every wall and roof, except for Wall 4.



16) On Wall 4 the screen should have Secondary and Trim turned on.

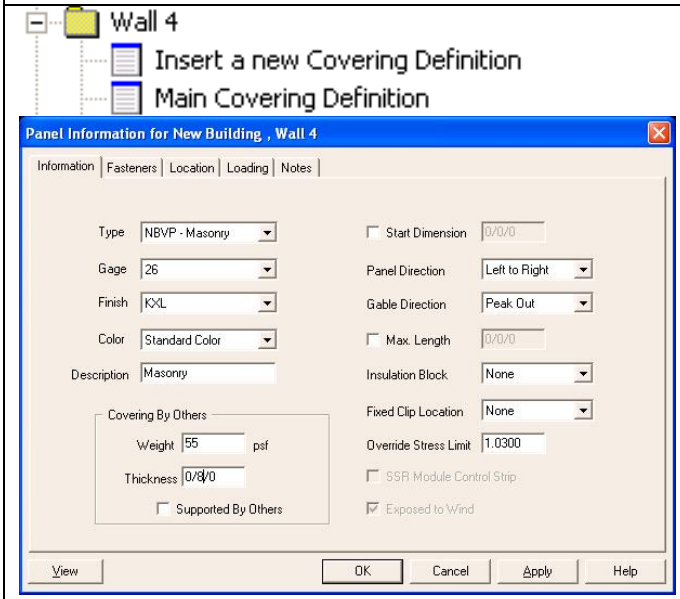


17) Because you identified Existing #2 as an Existing Building when defining the Geometry (Step), all of the walls are already turned off.



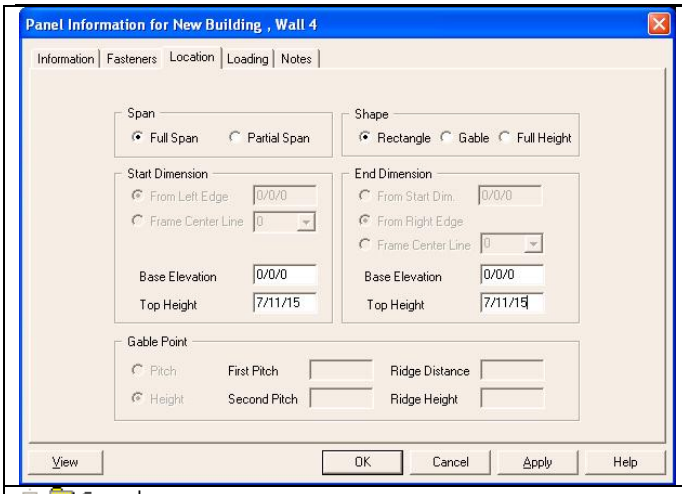
18) Framed Openings in wall 1 of New Building:

- Add a 3070 Walk Door framed opening 3'-0" from each sidewall, on Wall 1.
- Add 2 -10'x10' overhead door openings to wall 1 as well with each one centered between the end posts as shown here.

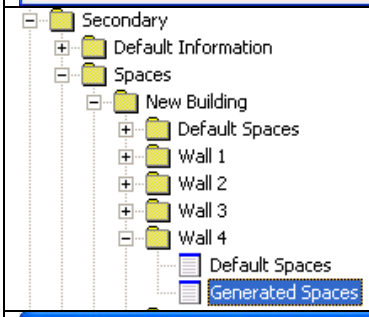


19) We need to add an 8'-0" masonry wall to wall 4 of the New Building.

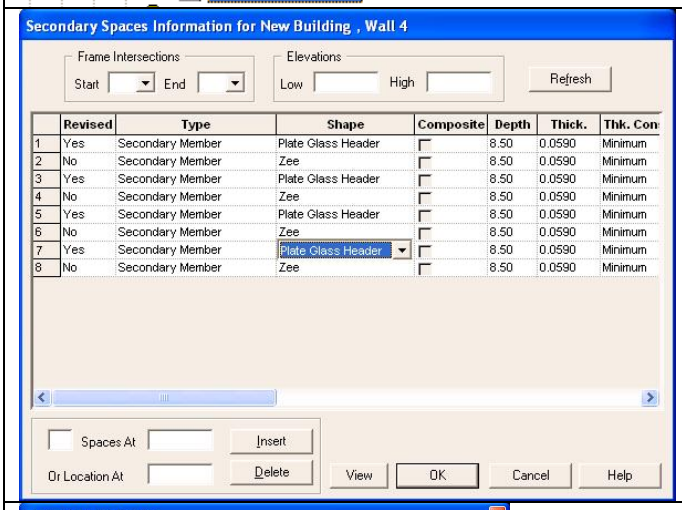
- Go to Covering / Default Information / Shape Name / Wall 4 and Insert New Covering Definition.
- Define it as masonry NBVP and type in the weight and thickness of the material you are using.



20) Notice we can define the height of the masonry wall 1/16" below the actual height so that we can add a girt at 8'-0" exactly (this is done because the Covering Type of NBVP-Masonry removes all secondary.



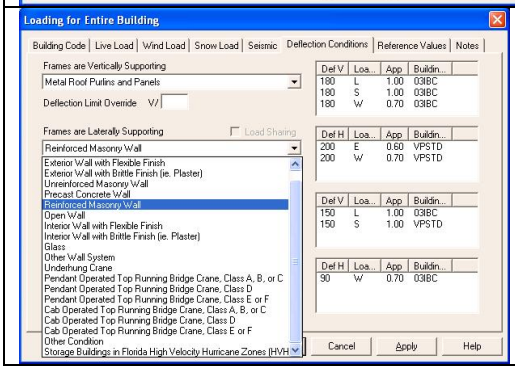
21) To add the girt go to Secondary / Spaces / New Building / Wall 4 and double click Generated Spaces.



22) Insert a girt at 8'-0". Change the Shape to Plate Glass Header from the drop down list for each girt located at the 8'-0" elevation.

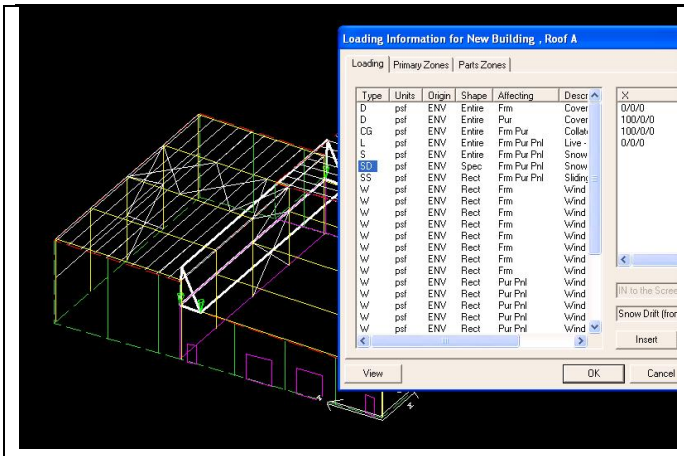
23) Scroll to the right and set the deflection limit to L/240, or whatever your specific material requires.

Deflection
240
0
240
0
240
0
240
0



24) Also if you need to hold a horizontal deflection limit on your primary frames you can do so by going to Loading / Loads and Codes / Deflection Conditions tab and choosing the option that best matches the type of material you are using.

- Any questions check with your Service Center.

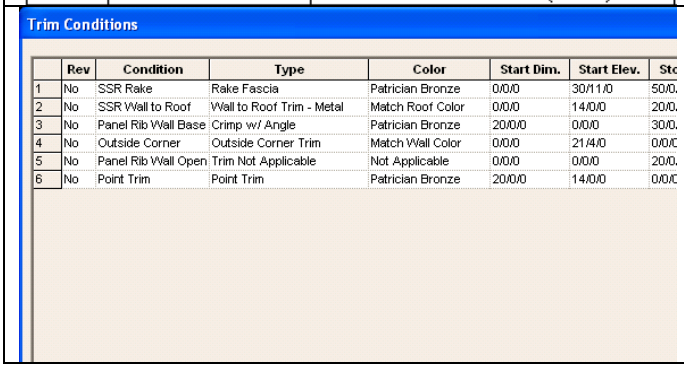


25) Check Loading
- Where the New Building and Existing Building #1 meet there will be some snow load applied to the New Building if required.
- You can check to make sure VPCommand is loading the building by going to Loading / New Building / Roof A and double click to revise.
- Now you can highlight the Snow Drift (SD) load and move the window out of your way. You should see it graphically on the screen.

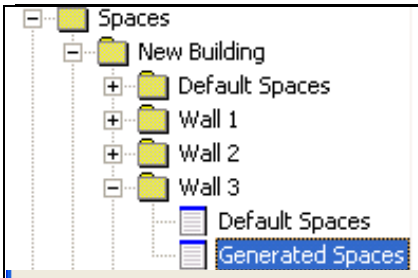
Trim

125	55307	1/4-14 x 1 1/4 Carbon (Traxx 3)
68	80130	Closure Panel Rib Inside 3'
0.5000	80345	Mastic Box 3/16 X 7/8 X 28"-Box of 100
1	80347	Mastic Box 3/16 X 7/8 X 9"(50) and 3"(150)
2.9080	80349	Mastic Roll 3/16 X 7/8 X 40'
5.6300	80390	Mastic Roll 3/16 X 1/4 X 40'
5	BWA0207	
5	BWC20	
10	BWT110	
10	LTA10	
50	PS4	SSR Panel Stiffener - Endlap PS4
550	57650	Roof Stitch 1/4-14 X 1 1/8" (Traxx 1) S.Steel
100	57400	Roof Struct 12-14 X 1 1/4" (Traxx 2) SSteel
10	SWRTA1	SWRTA SSR Wall to Roof Flash. 1:12 (PR/VR)
133.3300	Wall Stitch 7/8 Carbon	Wall Stitch 1/4-14 x 7/8 HWH (Traxx1)

26) Check Trim and Secondary between the New Building and the existing buildings to make sure the proper trim is present.
- You can also run the job and view the parts list to see exactly which trim gets detailed.
- Go to Trim / New Bldg / Roof A
- With Roof A highlighted, click the parts list toolbar button.

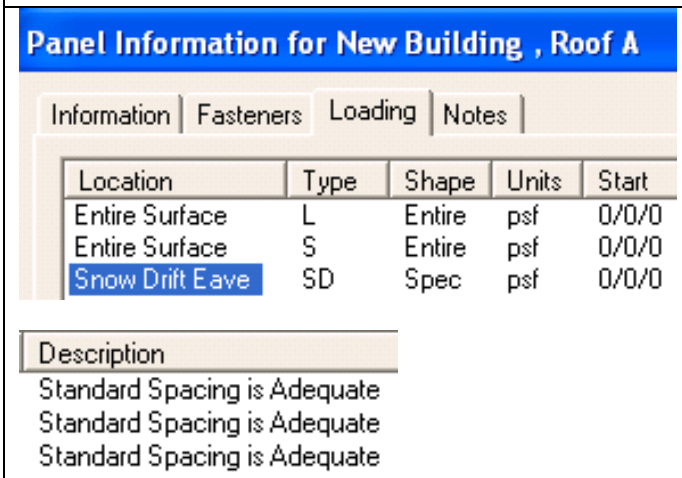


27) Go to Trim / Building Name / Wall # and Revise to see exactly what is being detailed.
- For Wall 3 of the New Building we can see that the Wall to Roof flashing is going to be priced for this condition.
- Check the start elevation to be sure it is in the correct location, for this case 14'-0" would be correct.



	Revised	Type	Shape	Start Elev.
1	No	Secondary Member	Cee	14/6/0
2	No	Secondary Member	Cee	14/6/0
3	No	Secondary Member	Zee	17/5/4
4	No	Secondary Member	Cee	14/6/0
5	No	Secondary Member	Zee	17/5/4
6	No	Secondary Member	Cee	14/6/0
7	No	Secondary Member	Zee	17/5/4

28) We can also check the secondary on this wall to make sure the wall to roof girt is in place.
- Go to Secondary / Spaces / New Building / Wall 3 / Generated Spaces and you will see that VPCommand added a girt at 14'-6" which is correct for this condition.



29) You can also check the covering design to see if it is failing due to the snow build up by going to the Covering / Default Information / Shape Name / Roof A.
- Double click the Main Covering Definition and click the Loading tab at the top of the window.
- Notice the third load in the list is called snow drift. If you scroll to the far right side of this line you will see the message telling you if the design was acceptable or if the secondary spaces need to be modified.

30) If the design fails VPCommand will automatically decrease the purlin spacing as required.

31) Run the job and generate reports as required.