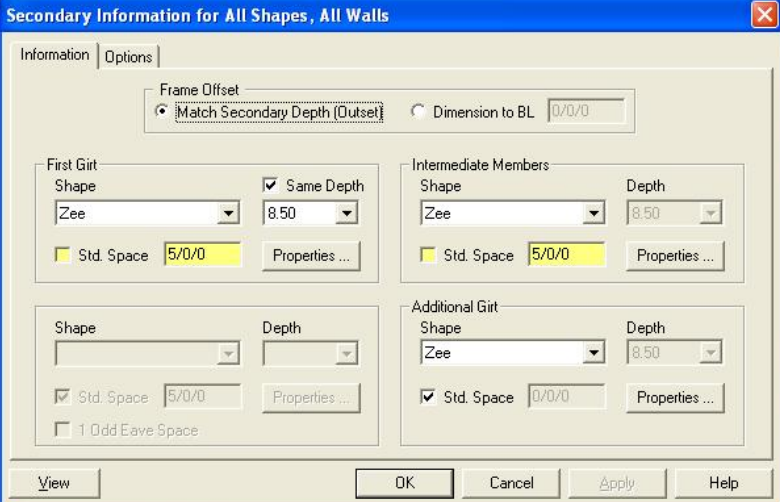
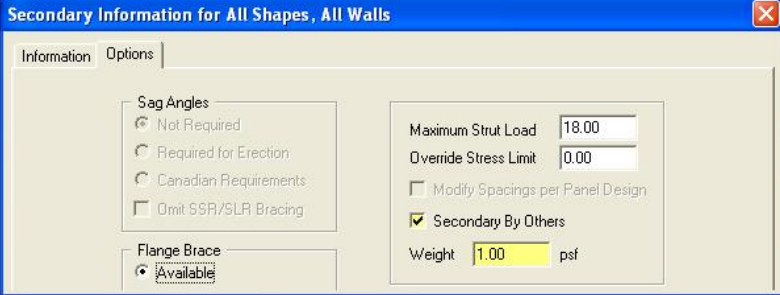
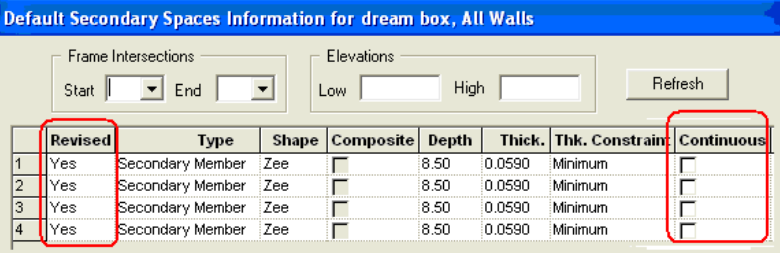
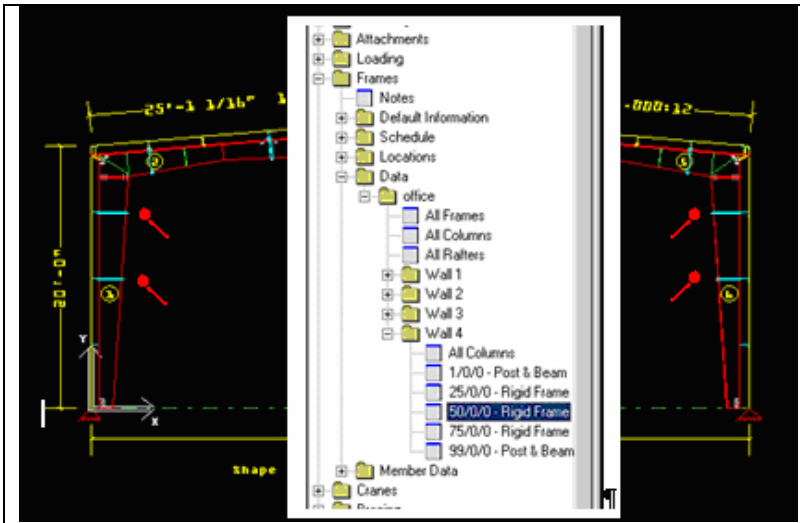


# Flange Brace to Masonry

Unsupported Columns can become quite costly and are, in fact, more expensive than supported columns. This procedure will allow you to take advantage of your Masonry Design by specifying that flange braces can be used. Note that you must design your masonry wall accordingly. VP will supply flange brace forces for design of masonry anchorage by others. Basically, you will be defining girts NBVP and allowing flange brace locations. Input a building of any width and length. Use a 20 foot eave height to get a couple of rows of girts.

	<p>1. Go to <i>Secondary / Default Info / All Walls</i></p>																																													
	<p>2. At the <i>Secondary Information</i> window uncheck "Std. Space" at the First Girt and Intermediate members section and input potential desired location to have flange braces. I show 5/0/0, but use what is best for masonry design and flange brace tie-in.</p>																																													
	<p>3. Still at the <i>Secondary / Default Info / All Walls</i>, Click on the "Options" tab. Select <i>Secondary By Others</i> and input a <i>Weight</i> of 1.0. OK out of this window.</p>																																													
 <table border="1"> <thead> <tr> <th></th> <th>Revised</th> <th>Type</th> <th>Shape</th> <th>Composite</th> <th>Depth</th> <th>Thick.</th> <th>Thk. Constrain</th> <th>Continuous</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Yes</td> <td>Secondary Member</td> <td>Zee</td> <td><input type="checkbox"/></td> <td>8.50</td> <td>0.0590</td> <td>Minimum</td> <td><input type="checkbox"/></td> </tr> <tr> <td>2</td> <td>Yes</td> <td>Secondary Member</td> <td>Zee</td> <td><input type="checkbox"/></td> <td>8.50</td> <td>0.0590</td> <td>Minimum</td> <td><input type="checkbox"/></td> </tr> <tr> <td>3</td> <td>Yes</td> <td>Secondary Member</td> <td>Zee</td> <td><input type="checkbox"/></td> <td>8.50</td> <td>0.0590</td> <td>Minimum</td> <td><input type="checkbox"/></td> </tr> <tr> <td>4</td> <td>Yes</td> <td>Secondary Member</td> <td>Zee</td> <td><input type="checkbox"/></td> <td>8.50</td> <td>0.0590</td> <td>Minimum</td> <td><input type="checkbox"/></td> </tr> </tbody> </table>		Revised	Type	Shape	Composite	Depth	Thick.	Thk. Constrain	Continuous	1	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>	2	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>	3	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>	4	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>	<p>4. Go to the <i>Secondary / Spaces / Default Spaces / All Walls</i> screen. Uncheck the <i>Continuous</i> box for all rows of girts. The system will then generate these girts behind the Masonry wall now that they are tagged as user inserted or revised.</p>
	Revised	Type	Shape	Composite	Depth	Thick.	Thk. Constrain	Continuous																																						
1	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>																																						
2	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>																																						
3	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>																																						
4	Yes	Secondary Member	Zee	<input type="checkbox"/>	8.50	0.0590	Minimum	<input type="checkbox"/>																																						



5. Complete a *Run All* from the Building Editor menu bar. Once the Run is successful do an elevation view of a typical frame to determine at what locations the system generated flange braces. In the picture at left, flange braces were generated at the 10'-0 and 15'-0 girt elevations, but not the 5'-0 elevation. I might then choose to allow flange bracing at these locations by taking the following steps.

Default Secondary Spaces Information for dream box, All Walls

Frame Intersections: Start  End

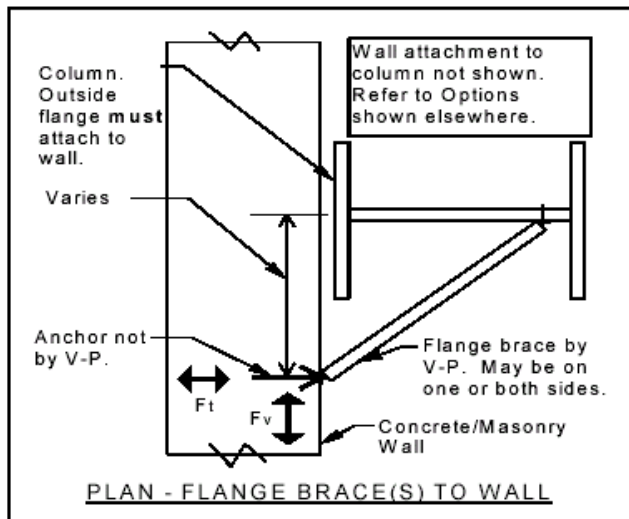
Elevations: Low  High  Refresh

	Start Dim.	Start Elev.	Start Remain	Stop Dim.	Stop Elev.	Stop Remain	Do Not Use	Properties	I
1	0/0/0	5/0/0	17/1/0	75/0/0	5/0/0	17/1/0	<input checked="" type="checkbox"/>		0
2	0/0/0	10/0/0	12/1/0	75/0/0	10/0/0	12/1/0	<input type="checkbox"/>		0
3	0/0/0	15/0/0	7/1/0	75/0/0	15/0/0	7/1/0	<input type="checkbox"/>		0
4	0/0/0	20/0/0	2/1/0	75/0/0	20/0/0	2/1/0	<input type="checkbox"/>		0

6. Go to the *Secondary / Spaces / Default Spaces / All Walls* screen. Scroll to the right of the table and click on the *Do Not Use* box for the girt at Elevation 5/0/0.

7. Complete a *Run All* from the Building Editor menu bar.

8. Complete Supplemental Price Book forms and provide these to your VP Service Center.

	<p><b>FLANGE BRACE (FB) DETAIL (if permitted)</b>          (Not allowed with Option B1 or Option D.)</p> <p>Flange bracing to wall <input type="checkbox"/> IS <input type="checkbox"/> IS NOT permitted.          The design of the attachment of the flange brace to the wall, generally a wedge or epoxy anchor, is not by VP Buildings.</p> <p><b>If flange braces are allowed, they will be considered to be allowed at the outside flange attachment locations given in Option A, B (if attached to wall) or C., unless specifically noted otherwise.</b></p> <p><b>Please provide flange brace locations with reference from finished floor if not allowed at outside flange attachments:</b>          Flange attachment locations: _____</p> <p><b><u>THIS INFORMATION IS BY VP BUILDINGS:</u></b></p> <p>1) <math>F_v =</math> _____ kips per flange brace          2) <math>F_t =</math> _____ kips per flange brace</p>
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**Warnings:**

- Set frame drift and wall material as desired.
- Column flange outsides must also be connected to masonry at all flange brace locations.
- You should provide your Service Center with applicable *Order Clarification Forms*. See OCF #'s FM702915 through FM702918.