

When the building has greater than 4' of cantilever, overhang, or combined cantilever and overhang, structural fascia will be needed to support some of that framing. When the corner is symmetrical the MiTek engineering program has a girder loading tool to aid in the calculation of loads from the fascia. The loading tool is not meant for a non-symmetrical corner. Contact your MiTek engineering contact for help loading non-symmetrical corners.

Open the corner girder truss and break the design connection if one exists.

In MiTek 20/20 Engineering go to Tools, Special Loads, and click on Reset all Load Cases as shown below:

	Special Loads - [Total LC's - 23] Select Manual or Girder Loading to add special loads to truss													
LC# 1 Dead + Roof Live (balanced)						•	 ✓ Rep. stress inc. ✓ Show all loads 		User Defined Truss to Truss		Manual Loading		<u>G</u> irder Loading	
Lbr DOL = 1.15 Plate DOL = 1.15														
			Show no roo	fzones		-								
	Chord	Туре	Distrib.	Load	Direct	Load-F	Begin	End	Val.1	Val.2	Panels	Source		^
	Тор	Dead	Uniform	Down	Х	Тор	-1-2-8	27-2-8	14.0p	14.0p	Selected			
	Тор	Dead	Uniform	Down	Х	Тор			10.0p	10.0p	Selected			
	Тор	Constr.	Uniform	Down	Х	Тор	0-1-12	3-3-8	60.0p	60.0p	Selected			
	Тор	Constr.	Uniform	Down	Х	Тор	-1-2-8	0-1-12	60.0p	60.0p	Selected			
	Ton	Constr	Uniform	Down	Х	Ton	4-6-15	9-6-0	60 On	60.0n	Selected			×
Г	Edit this load case only Reset All Load Cases New LC Remove LC Moving Load Edit Roof Zones Done 👔													

Go back to Tools, Special Loads, and click on Girder Loading – Create - Corner. Click on the check box next to Cantilever Corner Girder Loading.

Corner girder									
🔽 Cantilever Corner G	irder Loading								
Setback	130410								
End wall setback	130410	1							
End wall width	308	÷							
Corner framing type	Closed Jack 💌	Lengt							
Building overhang	1004	scia							
Building cantilever	5.	Га							
Fascia beam length	110214			<u>_ I I I</u>					
Fascia Beam Locatio	n	1	Bida Bida	Cathaola					
C End of cantilever	End of overhang		OH Cant.	Selback					
The magnitude of load to be applied to the jack and hip girder is 657.8									
				<u>O</u> K <u>C</u> ancel					



Cantilever Corner Girder Loading Tool in MiTek 20/20 Engineering and Structure with Truss Design.

In Structure with Truss Design go to Truss Loading, click the right mouse button on any load case, click Reset All Load Cases in pop-up menu as shown below:

Search and	View									
/ 🕞 Tru	isses 🖌 🖌 Loa	ading Notes Str	ess Deflection	Joints P	lates 🕻	Advanced Selection (Ctrl+A)				
Chord	Туре	Distribution	Load Direction	Direction	Be	Hide Selected				
RBC	RBC	RBC	RBC	RBC	=	Zoom Window (F10)				
> (Cour	nt=446)				0	Zoom Best Fit (F7)				
> 1: Dea	ad + Snow (ba	alanced) (Count:	=4, Selected=4)	33	Pan (F3)				
> 2: Dea	d + Roof Live	e (balanced) (Co	unt=6)			New Load Case				
> 3: Dea	ad + 0.75 Roo	of Live (balanced		Reset All Load Cases						
> 4: Dea	nd + 0.75 Sno	w (balanced) (Co	1	Save As Component						
> 5: Dea	nd + 0.75 Sno	w (Unbal. Left) (<u>A</u>	Mirror (Alt+M)						
> 6: Dea	nd + 0.75 Sno	w (Unbal. Right)	8	🕺 Combine Loads						
Search an	d View Interf	ferences Errors /	1	Reverse Webs (Shift+R)						
Docion Enil	ad Not Daria	uned (1) Deciance	and (Export To TRE						
eady						Reset Truss Materials	•			
						Save to Library				

Click on Advanced Loading in Load of the Ribbon Bar, click the right mouse button on Girder Loading and select New Girder Loading. Select Corner in Load Type drop-down menu and Yes for Cantilevered Corner Girder Loading.

File 📤 Truss Elevation 🛅 Drawing	and Markup 🛛 🦻 V	iew 📪 Output					
New Shape New Profile Rough Opening	Input Web ₽	Auto Cut	Fold Hinge	+++	Splicing	Panel Points	Parita
File	Member Input	loggles		Loads			
🖳 🖳 Loading Properties					12		×
Advanced Loading Girder Loading Comer Moving Loads Wind Exposure Controls Wind Exposure Settings		Search Comer 3-08 3-08 Girder Lk Yes 10-11-10 10-11-10 10-11-10 pe Closed Jack 1-04-00 6-00-00 th 10-01-03 tion End of Overhang 512.3 lb 512.3 lb	Fascia Length	Відд	Bidg. Cant.	Setback	
	nd hip girder.						
					ОК	Ca	ancel



Cantilever Corner Girder Loading Tool in MiTek 20/20 Engineering and Structure with Truss Design.

This loading tool will load for all the jacks as well as the fascia, so resetting the load cases will clear out any loads from the jacks that are already on the truss.

Verify your setback, overhang length and cantilever length. The overhang and cantilever lengths are the lengths on the common truss, not the corner-truss. Change the corner framing type to closed jack or open jack/rafter based on what you have. When figuring out the fascia length, try to stop the fascia at a jack that has at least half of the total span within the building. The more span of truss that is in the building will help reduce the uplift resulting from the fascia load. In Fascia Beam Location select where the fascia beam will tie into the trusses - either end of cantilever or end of overhang.

Once all of your information is correctly filled in look at the very bottom of the box and find the number next to: *The magnitude of load to be applied to the jack and hip girder is XXX* in MiTek 20/20 Engineering, or in *Applied Magnitude* in Structure with Truss Design. Write this number down because you will need to manually add this load to the ends of the trusses that are supporting the other ends of the fascia. (The hip girder does not have to be a support truss. It is just shown that way for this example)

Click "OK" and the loads will be applied to the corner truss as trapezoidal loads for the jacks and point loads for the fascia beam. Open the trusses that support the other ends of the fascia and add the load you wrote down from the previous step.

For additional information, or if you have questions, please contact the MiTek Engineering department.