Modifying Garage Floor and Stem Wall Heights

Reference Number: **KB-01855** Last Modified: **July 14, 2021**

The information in this article applies to:



QUESTION

After naming my Garage room, the floor and ceiling height information changed. Why does this happen?



ANSWER

When Auto Rebuild Foundation is turned on, naming a room as a Garage will cause changes to the way the foundation is built under that room.

First, begin with creating a basic plan, where you will be using all of the default settings for Floor 1 floor and ceiling heights, and for building the foundation.

To create the basic plan

In a new plan file in floor plan view, select Build> Wall> Straight Exterior Wall
 in then click and drag out the walls to create a basic structure with attached garage, as shown in the image below.



Once the main building and garage room have been created, the foundation is automatically created with the default stem wall and footing heights.

If your foundation does not automatically generate, click **Build> Floor> Build Foundation** , put a check in the **Automatically Rebuild Foundation** box and click **OK**.

The floor and ceiling heights in the room that will be designated as the Garage are still at the default for Floor 1. The Floor height is 0" and in our case, the Finished Ceiling height is 107 5/8".

- 2. To verify this information, use the **Select Objects** k tool to click on the smaller room on Floor 1, which will become the Garage, then click on the **Open Object** edit button.
- 3. In the **Room Specification** dialog, notice the values set on the **S**TRUCTURE panel.

neral	Absolute Elevations			
tructure	Floor Above:	114 5/8"	2/	
eck	Ceiling:	109 1/8"	0	
eck Support	-	105 1/0	4.5	
Vall Covering	Floor:	0-		
ill Style	Floor Below:	0"	2/	
laterials	Relative Heights			
chedule	Rough Ceiling:	109 1/8"	2	
	Finished Ceiling:	107 5/8"	0	
	SWT To Ceiling:	109 1/8"	12	
	Ceiling Below:	0"		
	Stem Wall:	37 1/2*		
	SWT - Stor Wa	Top		
			t Ceiling Over 1	This Room
	Caliba Staustura	Fla	elf Ceiling Over elf Ceiling e Soffit Surface	This Room
	Ceiling Structure	 ✓ Fla Sh Us 5 1/2" 	t Ceiling Over elf Ceiling e Soffit Surface Edit	This Room e for Ceiling Default
	Ceiling Structure Ceiling Finish:	 ✓ Fla Sh Us 5 1/2⁼ 5/8⁼ 	t Ceiling Over elf Ceiling e Soffit Surface Edit	This Room e for Ceiling Default Default
	Ceiling Structure Ceiling Finish: Floor	 ✓ Fla Sh Us 5 1/2[*] 5/8[*] 	t Ceiling Over elf Ceiling e Soffit Surface Edit Edit	This Room e for Ceiling Default Default
	Ceiling Structure Ceiling Finish: Floor	 ✓ Fla Sh Us 5 1/2" 5/8" ✓ Fla 	elf Ceiling Over T elf Ceiling e Soffit Surface Edit Edit	This Room e for Ceiling Default Default Room
	Ceiling Structure Ceiling Finish: Floor	 ✓ Fla Sh Us 5 1/2[*] 5/8[*] ✓ Fla ✓ Fla 	elf Ceiling Over T elf Ceiling e Soffit Surface Edit Edit	This Room e for Ceiling Default Default Default Room the Foundation Room Below
	Ceiling Structure Ceiling Finish: Floor	 ✓ Fla Sh Us 5 1/2" 5/8" ✓ Fla Fla Ma 	t Ceiling Over elf Ceiling e Soffit Surface Edit Edit	This Room e for Ceiling Default Default Coom the Foundation Room Below undation
	Ceiling Structure Ceiling Finish: Floor Slab Pour Numbe	 ✓ Fla Sh Us 5 1/2" 5/8" ✓ Flo Flo Mo ar: 1 	t Ceiling Over T elf Ceiling e Soffit Surface Edit Edit	This Room for Ceiling Default Coom the Foundation Room Below undation
	Ceiling Structure Ceiling Finish: Floor Slab Pour Numbe Floor Finish:	 ✓ Fla Sh Us 5 1/2" 5/8" ✓ Fla 	t Ceiling Over T elf Ceiling e Soffit Surface Edit Edit	This Room for Ceiling Default Coom the Foundation Room Below undation Default Default
	Ceiling Structure Ceiling Finish: Floor Slab Pour Numbe Floor Finish: On Structure Res	 ✓ Fla Sh Us 5 1/2" 5/8" ✓ Fla Fla I Fla I T/8" size: ● Lo 	t Ceiling Over T elf Ceiling e Soffit Surface Edit Edit or Under This P or Supplied by molithic Slab Fo Edit ck Floor Top (This Room for Ceiling Default Coom the Foundation Room Below undation Default Default Default Default Default Default Default

4. Next, select the GENERAL panel, and use the **Room Type** drop-down menu to select **Garage**, then hit **OK**.



When the Room type is changed, the foundation is rebuilt to reflect these changes.

5. **Open** The garage room to specification and return to the **S**TRUCTURE panel to see the changes.

neral	Absolute Elevation	ns						
ructure	Floor Abov	ve: 114	5/8"	2/				
eck	Ceiling:	109	1/8"	9				
eck Support	cennig:	105	2/0					
/all Covering	Stem Wall	Top: -14	1/8-	8				
ill Style	Floor:	-26	1/8"	P				
laterials	Relative Heights	_						
omponents chedule	Rough Ceili	ing: 135	1/4"	ሮ				
	Finished Ce	eilina: 134	5/8"	<u>ر</u>				
	SWT To Ce	eilina: 123	1/4"	e ا				
	Floor To SV	WT: 12"		0				
	Cham Mially	22.1	/2ª	<u>س</u>				
	Stem waii:	22 1	.12	Y I				
	SWT = Ste	m Wall Top						
	Ceiling							
	Coming							
	Coning			er This Ro	om			
	Coming		✓ Roof Ov ✓ Flat Ceil	ver This Ro ing Over Ti	om his Ro	oom		
	County		Roof Ov Flat Ceil	ver This Ro ing Over Ti eiling	om his Ro	oom		
	County		 ✓ Roof Ov ✓ Flat Ceil Shelf Ceil Use Sof 	ver This Ro ing Over Tl iling fit Surface	om his Ro	oom		
	Ceiling Stru	ucture:	 ✓ Roof Ov ✓ Flat Ceil Shelf Ce Use Sof 5 1/2" 	ver This Ro ing Over Ti illing fit Surface Edit	om his Ro for C	oom eiling Default	6	
	Ceiling Stru Ceiling Stru	ucture: sh:	Roof Ov Flat Ceil Shelf Ce Use Sof 5 1/2"	ver This Ro ing Over Tl eiling fit Surface Edit Edit	om his Ro for C	oom eiling Default Default	6	
	Ceiling Stru Ceiling Finis	ucture: sh:	Roof Ov Flat Ceil Shelf Ce Use Sof 5 1/2" 5/8"	ver This Ro ing Over Tl eiling fit Surface Edit Edit	om his Ro for C	oom eiling Default Default	5	
	Ceiling Stru Ceiling Finis	ucture: sh:	Roof Ov Flat Ceil Shelf Cei Use Sof 5 1/2" 5/8"	ver This Ro ing Over Tl illing fit Surface Edit Edit	om his Ro for C	oom eiling Default Default		
	Ceiling Stru Ceiling Finis	ucture: sh:	 ✓ Roof Ov ✓ Flat Ceil ✓ Shelf Ceil ✓ Use Sof 5 1/2" 5/8" ✓ Floor Ur ✓ Floor Su 	ver This Ro ing Over Tl illing fit Surface Edit Edit	om his Ro for C] [2]] [2] oom	oom eiling Default Default	Room B	elow
	Ceiling Stru Ceiling Finis	ucture: sh:	Roof Ov Flat Ceil Shelf Cei Use Sof 5 1/2" Floor Ur Floor Ur Floor Su Monolith	ver This Ro ing Over Tl illing fit Surface Edit Edit ider This Ro opplied by t	om his Ro for C]	oom eiling Default Default oundation	n Room B	elow
	Ceiling Stru Ceiling Finis Floor Slab Pour N	ucture: sh:	 Roof Ov Flat Ceil Shelf Ceil Shelf Ceil Use Sofi 1/2" 5/8" Floor Uri Floor Su Monolithing 	ver This Ro ing Over Tl illing fit Surface Edit Edit ider This Ro nder This Ro ider Slab Fou	om his Ro for C]]]]]]]]]]]]]	oom eiling Default Default oundation	n Room B	elow
	Ceiling Stru Ceiling Finis Floor Slab Pour N Floor Finish	ucture: sh: Number:	 Roof Ov Flat Ceil Shelf Ceil Shelf Ceil Use Soft 1/2" Floor Ur Floor Su Monolith 1 	ver This Ro ing Over Tl illing fit Surface Edit Edit ider This Ro nder This Ro state Slab Fou	om his Ro for C]	oom eiling Default Default oundation ion Default	n Room B	elow
	Ceiling Stru Ceiling Finis Floor Slab Pour N Floor Finish	ucture: sh: Number: n:	Roof Ov Flat Ceil Shelf Cei Use Sof 5 1/2" Floor Ur Floor Ur Floor Su Monolith 1 O Lock Ele	ver This Roo ing Over Tl eiling fit Surface Edit Edit nder This Roo pplied by t nic Slab Fou	om his Ro for C]	oom eiling Default Default oundation ion Default	n Room B	elow
	Ceiling Stru Ceiling Finis Floor Slab Pour N Floor Finish On Structu	ucture: sh: Number: n: ure Resize:	Roof Ov Flat Ceil Shelf Cei Use Sof 5 1/2" Floor Ur Floor Ur Floor Su Monolith 1 C Lock Flo	ver This Roming Over The ing Over The illing fit Surface Edit Edit inder This Roming polied by the inic Slab Fould Edit Edit	om his Ro for C]	oom eiling Default Default oundation ion Default ck Floor B	n Room B	elow

- The **Stem Wall Top** height value is added to the Absolute Elevations and is set to the height of the underside of the floor joists on Floor 1. The floor is changed to a slab and the slab is lowered 12" below the top of the stem wall.
- The Stem Wall height is set to 22 1/2".
- The **Floor Finish** is set to **0**" and the **Floor Structure** becomes a **4**" concrete slab.

6. Click **OK** to close the dialog and take a **Perspective Full Overview** to see the results so far.



You may want to change the Stem Wall height to meet your frost depth needs, however, before making any changes to the Structure settings in the Room Specification dialog, you must first turn off Auto Rebuild Foundation.

To turn off Auto Rebuild Foundation

- 1. Select Build> Floor> Build Foundation 🛄.
- 2. In the **Build Foundation** dialog, remove the check next to **Automatically Rebuild Foundation**, then click **OK**.

Build Found	ation	×
Foundation Options	Automatically Rebuild Foundation Foundation Type Walls with Footings Grade Beams on Piers Monolithic Slab Hang 1st Floor Platform Inside Foundation Walls Show S Markers on Stepped Foundation Footings 	

3. In the **New Floor** dialog that appears next, choose **Derive new foundation plan from the 1st floor plan** and click **OK** again.

New Floor		×
Derive new foundation pla	an from the 1st fl	oor plan
Move the roof ove	r the highest floo	or up
Step floor/ceiling e	levations to mate	ch existing floor
O Make new blank plan for t	he foundation	
ОК	Cancel	Help

- 4. Use the Select Objects tool to click within the Garage room on the Foundation level, and click on the Open Object edit button to display the Room Specification dialog.
- 5. On the **S**TRUCTURE panel, select the **Default** option next to **Stem Wall** to set the Stem Wall height to 37 1/2" to match the stem wall created for the main house.

neral	Absolut	te Elevations	
tructure		Floor Above:	114 5/8"
Deck Deck Summent		Ceilina:	109 1/8"
Moldings		Stem Wall Ten	14.1/0*
Wall Covering		-	
ill Style		Floor:	26 1/8" (7)
Components	Relative	e Heights	
Schedule		Rough Ceiling:	135 1/4"
		Finished Ceiling:	134 5/8"
		SWT To Ceiling:	123 1/4"
		Floor To SWT:	12" (0)
		Stem Wall:	37 1/2" ⁽¹⁾ /
		SWT - Stem Wall 1	
		Swi - Stem wai	Use Default
	Ceiling	5.	
	+		Roof Over This Room
	Je.		Flat Ceiling Over This Room
			Shelf Ceiling
			Use Soffit Surface for Ceiling
		Ceiling Structure:	5 1/2" Edit 🔽 Default
		Ceilina Finish:	5/8" Edit 🔽 Default
	Floor -		
			Hoor Under This Room
			✓ Floor Supplied by the Foundation Room Below
			Monolithic Slab Foundation
		Slab Pour Number:	1
		Floor Finish:	0" Edit 🗹 Default
		On Structure Resiz	e: 💿 Lock Floor Top 🕜 Lock Floor Bottom
		Flags Church was	

The slab remains in its original position, 12" below the top of the stem wall, but the footing is moved down to accommodate the increased stem wall height.

6. You can raise or lower the slab by modifying the **Floor To SWT** value.

General	Absolute Elevations	211	
Structure	Floor Above:	114 5/8"	믿
Deck Deck Support	Ceiling:	109 1/8"	2
Moldings	Stem Wall Top:	-14 1/8"	ť
Fill Style	Floor:	-20 1/8"	也
Materials	Relative Heights		
Schedule	Rough Ceiling:	129 1/4"	ť
	Finished Ceiling:	128 5/8"	也
	SWT To Ceiling:	123 1/4"	也
	Floor To SWT:	6*	也
	Stem Wall:	37 1/2"	(4)

- To create a 6" curb, or stem wall above the slab, set this value to**6"**.
- Click **OK** to apply this change and close the dialog.
- Finally, select 3D> Create Perspective View> Perspective Full Overview in to see the change.



Creating a Cutout for Doors in Concrete Walls (/support/article/KB-00965/creating-acutout-for-doors-in-concrete-walls.html)

<u>Atching Building and Terrain Heights (/support/article/KB-00321/matching-building-and-terrain-heights.html</u>)



Privacy Policy (/company/privacy.html)