

Creating CBS Walls With a Tie Beam

Reference Number: **KB-00495**

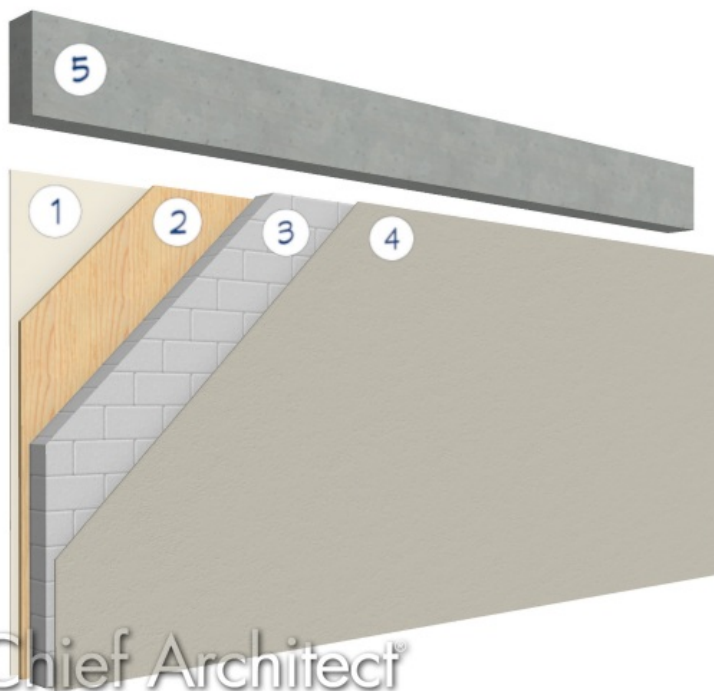
Last Modified: **May 23, 2024**

The information in this article applies to:



QUESTION

I live in the Southeastern United States and regularly build CBS structures. How do I model a CBS wall that is block on the bottom and has a tie beam on top?




①	DRYWALL
②	FRAMING
③	CONCRETE BLOCKS
④	STUCCO
⑤	TIE BEAM

ANSWER

A CBS, or concrete, block and stucco wall with a tie beam on top can be modeled using pony walls. The bottom wall type typically has a stucco exterior, then a layer of eight inch concrete block, followed by a thin framing stud, and finally a layer of half-inch sheetrock. Along the top of this block wall is tie beam composed of a continuous pour of concrete all the way around the top of the structure.

A pony wall can be used to model both of these walls in the same wall section.

To create a CBS wall

1. In your desired plan, navigate to **Build> Wall> Define Wall Types**  to open the **Wall Type Definitions** dialog.
2. Create two new custom wall types - one for the lower block wall and one for the tie beam, or upper wall.

Please see the [Related Articles](#) section below for more information on creating and defining wall types.

- o A predefined CBS wall type option is available in most all template files. You can **Copy** this wall type and name it **CBS Lower Wall**.

Wall Type Definitions

CBS Lower Wall New Copy Rename Delete Delete All Unused

Wall Layers

Layer #	Line Color	Line Style	Weight	Material	Pattern	Texture	Fill	Thickness	Extension	Display Layer	
Exterior Layers											
1		———	1	Sand Finish - ...		No Texture		5/8"	8"	Default	
Main Layers											
2		———	35	Grey-Blocks ...				8"		Default	
Interior Layers											
3		———	1	Fir Framing 2				1 1/2"		Default	
4		———	1	Drywall		No Texture		1/2"		Default	

Insert Above
Insert Below
Move Up
Move Down
Delete

Total Thickness: 10 5/8"

Material Properties Layer Properties Wall Properties

Framing

Use Default Framing Material

Place Framing On Display Layer

Type: Lumber On Center Horizontal Framing

Stud Spacing: 0"

Stud Width: 0"

Top Plate Count: 2

Top Plate Width: 1 1/2"

Bottom Plate Count: 1

Bottom Plate Width: 1 1/2"

Max Plate Length: 144"

Auto Detail as Insulation

Air Gap

Bottom Run Elevation: 0"

Max Girt Length: 144"

If you choose to modify a wall type that is already in use in your plan, all existing walls in the file that are using that wall type will update when you make changes to the wall type. This is why it's recommended to create a copy of an existing wall type.

- You can also **Copy** a concrete wall type and name it **CBS Upper Wall**.

Wall Type Definitions

CBS Upper Wall New Copy Rename Delete Delete All Unused

Wall Layers

Layer #	Line Color	Line Style	Weight	Material	Pattern	Texture	Fill	Thickness	Extension	Display Layer
Exterior Layers										
Main Layers										
1			35	Concrete				10 5/8"		Default
Interior Layers										

Insert Above
Insert Below
Move Up
Move Down
Delete

Total Thickness: 10 5/8"

Material Properties **Layer Properties** Wall Properties

Framing

Use Default Framing Material

Place Framing On Display Layer

Type: Lumber On Center Horizontal Framing

Stud Spacing: 0"

Stud Width: 4"

Top Plate Count: 2

Top Plate Width: 1 1/2"

Bottom Plate Count: 1

Bottom Plate Width: 1 1/2"

Max Plate Length: 144"


Bottom Run Elevation: 0"

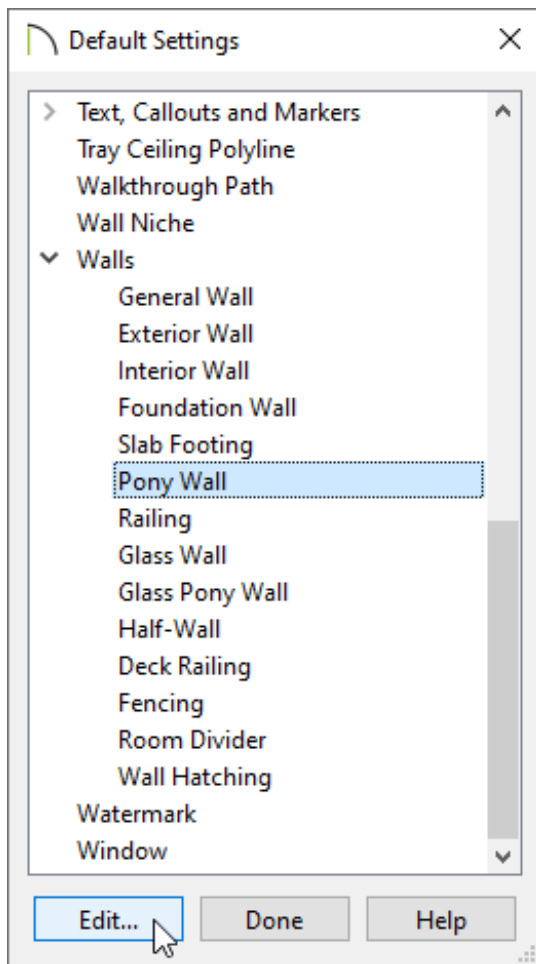
Max Girt Length: 144"

Auto Detail as Insulation

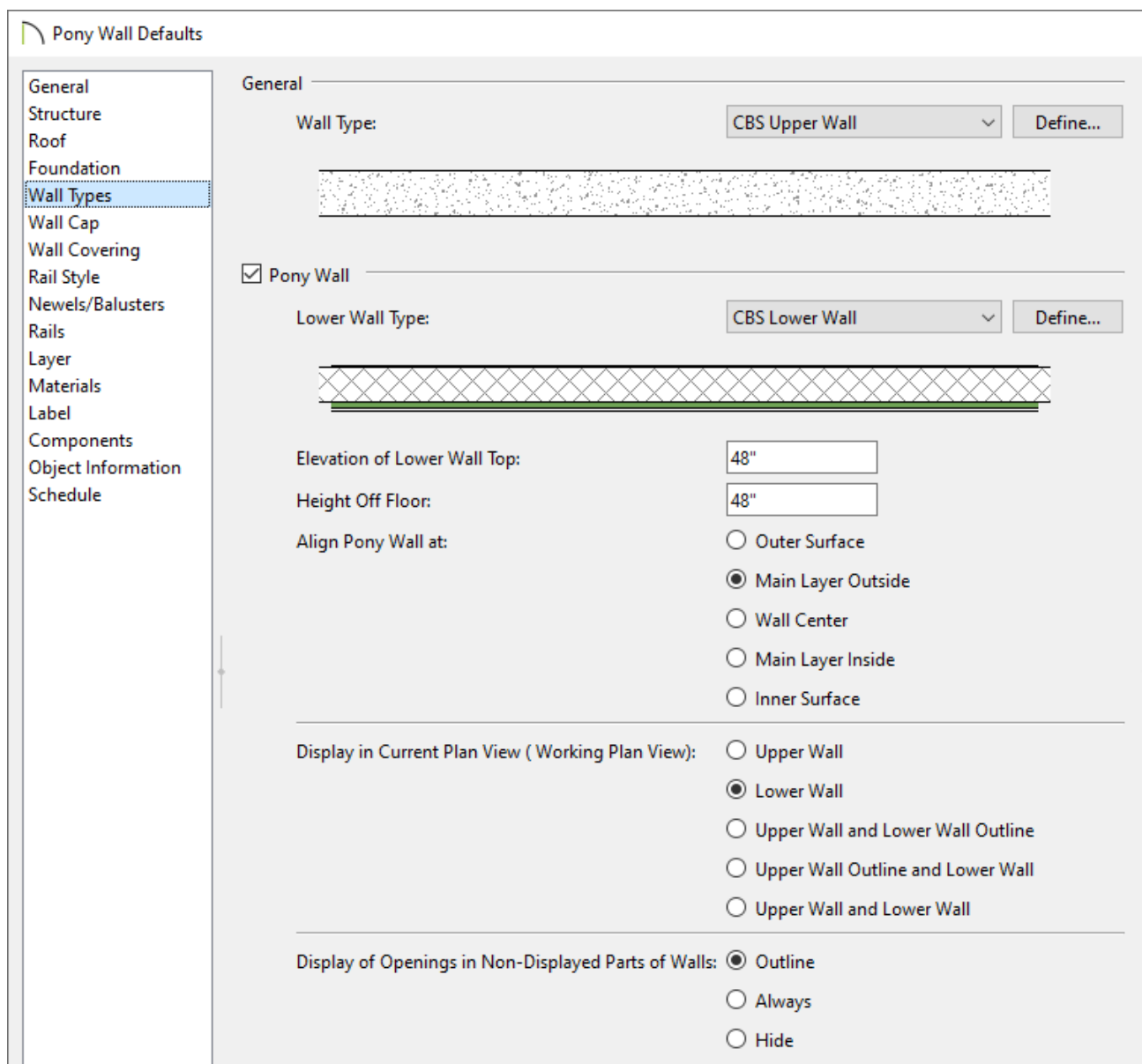
Air Gap

○ Typically, these two wall types will have the same Total Thickness.

3. Select **Edit> Default Settings**  from the menu, and in the **Default Settings** dialog that displays, expand the **Walls** category, click on **Pony Wall**, then click **Edit**.



4. On the **WALL TYPES** panel of the **Pony Wall Defaults** dialog that displays:




- Click the **Wall Type** drop-down menu and choose your CBS tie beam wall type from the list.
 - Click the **Lower Wall Type** drop-down menu and choose your CBS block wall type from the list.
 - Specify the desired **Height** of the Lower Wall.
 - Specify the alignment and display settings to your liking.
5. Access the **WALL CAP** panel to make adjustments to the sill cap, if one is present. You can also delete any profiles located here if they are undesired.
 6. Click **OK** and **Done** to confirm the changes and close out of all of the dialog boxes.

7. Select **Build> Wall> Straight Pony Wall**  from the menu, then click and drag to create a custom CBS wall.




Related Articles

 [Changing an Existing Wall's Type \(/support/article/KB-00443/changing-an-existing-wall-s-type.html\)](/support/article/KB-00443/changing-an-existing-wall-s-type.html)

 [Defining a New Wall Type \(/support/article/KB-02944/defining-a-new-wall-type.html\)](/support/article/KB-02944/defining-a-new-wall-type.html)



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