

Creating Slabs-on-Grade

We are going to create a 4” slab on grade, with 12” x 12” perimeter and interior bearing wall footings.

First, let's create main slab-on-grade, 4” thick.

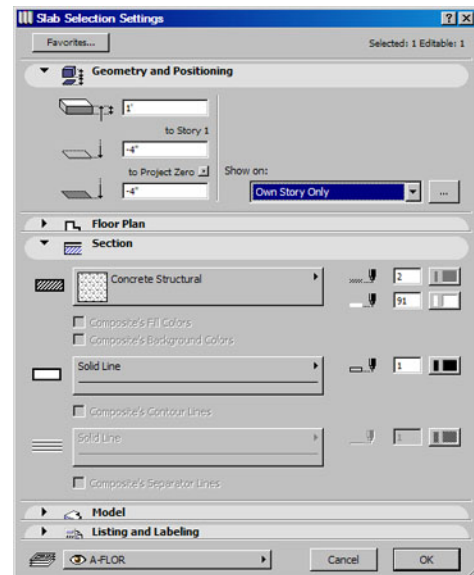
1. Turn off all layers except the exterior walls and the foundation layer. Open the Slab tool settings and set the thickness to 4 in., choose “Concrete Structural” as the fill material, choose the “Foundation” or “A-FLOOR” layer.
2. Create the slab-on-grade. With the spacebar held down, (this activates the Magic Wand cursor), click the outside perimeter of the exterior walls. This will auto-trace the perimeter of the exterior walls, creating a foundation slab underneath them. Alternatively, trace the slab with the polygon construction method selected.

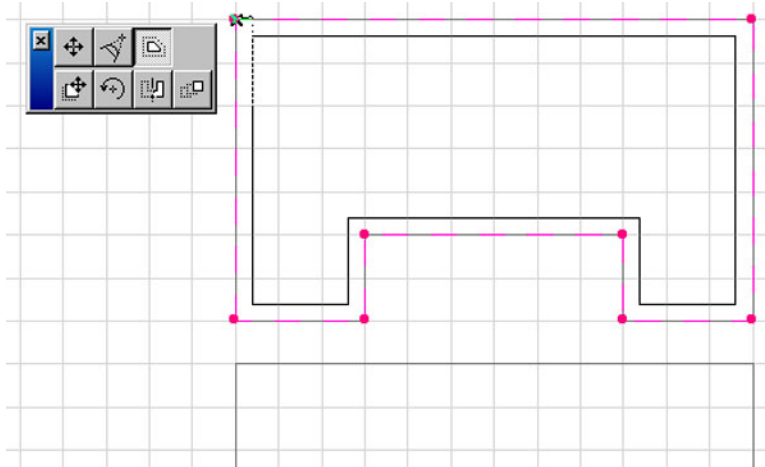
Now we will create the footing slab.

3. Select the foundation slab and choose “Drag a Copy” from the Edit menu. Drag this slab just a bit beyond the original slab.
4. Now, with this new slab selected, open the Tool settings for this slab and change its thickness to one foot and its elevation “to project 0” to -4 in. This will locate the footing at the correct elevation below the foundation slab.

Next, we are going to create construction lines that will indicate where the inside of exterior and bearing wall footings will be located. These construction lines will help us auto-trace the holes we are about to create in the footing slab.

5. Choose the Poly line tool. Open the settings for the PolyLine and choose a dashed line style and the appropriate layer (we recommend you create a layer called “Construction Lines” where you can place non-plotable guidelines and under lying geometry). Space-bar click on an exterior edge of the slab you just created. This auto-traces the periphery of the slab with a 2D poly line.
6. With the Poly line tool still active, hold down the shift key and click on an endpoint node of the poly line to select it.





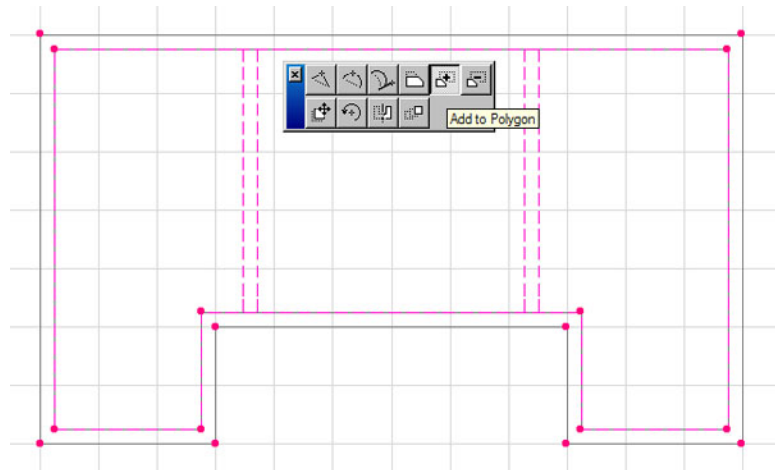
will act as guidelines to help establish a hole in the footing slab.

7. Click and hold the mouse button down on any poly line node and the editing Pet Pallet will appear. Choose the parallel offset option.
8. Drag the cursor toward the inside of the foundation a bit, press the “r” key, type “1” on the keyboard (for one foot). This will shrink the poly line inward and

Now all we have to do is to cut away the excess slab material in the footing slab, leaving typical continuous pour footings.

9. Select the footing slab, then choose the Slab tool or with the Slab tool active Shift + click on the footing slab to pick it. Remember, the Slab tool must be active.
10. With the footing selected and the Slab tool active, hold down the space bar and click on each interior poly line tracing. This auto-traces a hole in the selected footing slab, creating a continuous pour peripheral footing.
11. To create interior bearing wall footings, use the line tool to locate the edges of the interior bearing walls.

12. Select the footing slab, activate the Slab tool, click on an interior edge of the footing slab and choose the addition editing tool (the one with the plus sign).



13. Click and drag a thin rectangular slab one foot wide over the center of any interior bearing wall, starting and ending inside the peripheral footing, which will add interior bearing wall footing runs.

14. Now, drag the footing slab directly under the slab-on-grade.

15. If you want to show the footings dashed on your floor plan (if you used a separate story to create your foundation) select the footing slab and open the Slab settings dialog box and choose show on “story above.” When you go up a story to your first floor plan, the dashed footing lines will be visible.
16. To create pad footings, make separate slabs under their appropriate posts or columns at the same elevation as the footing slabs.
17. Final results: when you create a section, the slab(s) are shown with their footings below, with the concrete fill material blended with the slab above.

