

C.7 FORM PLACEMENT

The first course of PolySteel Forms will set the tone for the entire installation. Plumb, level, and square are the “Alignment” concerns to keep in mind as you begin placing the forms and throughout the installation process. Setting the first course in a wet footing can save you time and materials. See Section D.2 of the Manual for detailed procedures on this technique.

C.7.1 MARK THE WALL LOCATION.

On a clean, dry footing, or slab, snap a chalk line to indicate the perimeter of the wall. Mark the location and dimension of all openings on the footing or slab, including the height of the window openings to be formed.

C.7.2 START AT THE CORNERS.

The starting point for laying all PolySteel walls is a corner. There are two types of corner forms (Right and Left), which are designed to establish a running bond, or stagger, pattern as you place one course of forms on top of another. [Figure 3.6](#) below illustrates which corner is a “Right” and which one is a “Left”, which may also be indicated on the form itself. If you do not have molded corner forms on hand, you can refer to Section D.5 for instructions on how to cut mitered corners with the appropriate angle and stagger of the joints for succeeding layers of forms.

***Note:** If your project calls for a transition from one size form to another (e.g., an 8” wall turns to the corner into a 6” wall), refer to Section D.10 of the Tips and Techniques section of this Manual for instructions on how to easily make this wall connection .*

C.7.3 SECURE TO THE FOOTING.

Starting at one corner, apply an approved polyurethane foam adhesive to the bottom of a corner form. We recommend that you apply a continuous 1/4” bead of foam to both sides of each groove on the bottom of the form. Align the glued form with the perimeter chalk line and press it down onto the concrete. Take the next form and apply adhesive to the bottom and the mating end and place it on the concrete, making sure that the horizontal tongues are facing up. The forms are reversible from end to end, so you need not worry about the direction in which you place them together. You may use the Carolina Clippers (Section D.4) in place of adhesive to secure the forms end to end on the first course, and top to bottom on all other courses. If using Carolina Clippers for this purpose, the forms must be placed in the same direction end-to-end.

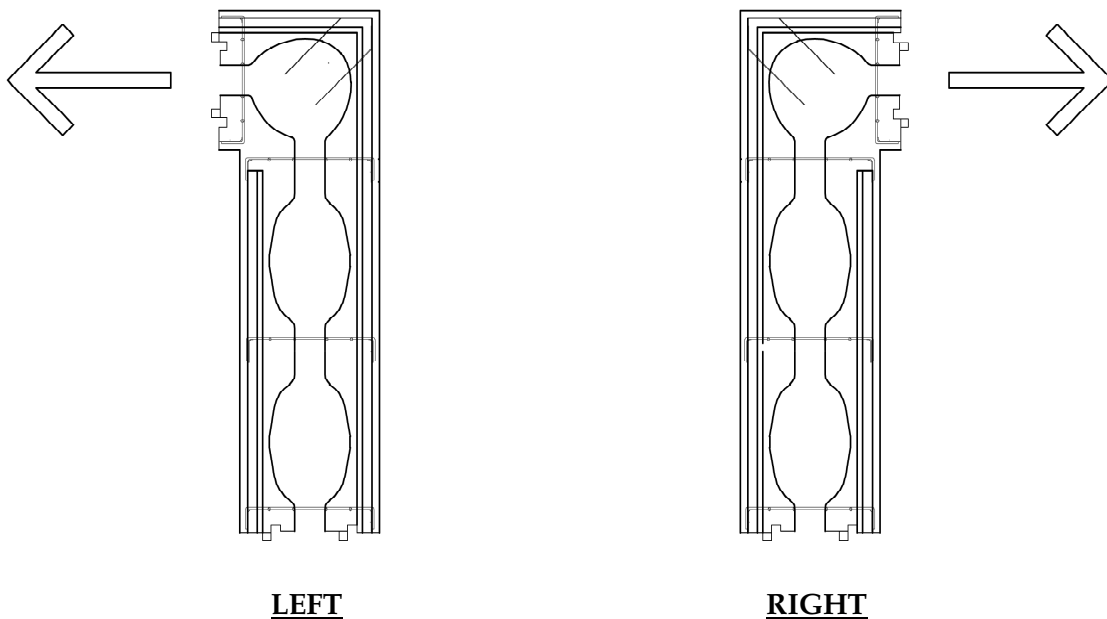
***CAUTION:** Using too much foam adhesive will allow the foam to expand excessively and push the PolySteel Forms up and/or out of position. Approved foam adhesives set up in about 10 minutes.*

- ✓ Shim and/or shave the bottom of the forms, as necessary, to level the first course. You may often use the foam adhesive as a leveling mechanism to even out imperfections in the footing.

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C.7.3 SECURE TO THE FOOTING (*continued*).

Figure 3.6 CORNER ILLUSTRATION (R&L)



Note: The direction of the corner is determined by standing on the inside of the corner form, with the tongues facing up, and noting the direction of the turn on the short side.

C.7.4 WORK IN FROM THE CORNERS.

Work your way towards nearest window or door opening, or the center of the wall, from opposing corners. When you reach a point that requires a form to be cut, use a hand saw or hot knife to cut the form at least 1/2" less than the space you are trying to fill. **It is important that you do not insert a cut form that is too tight, as this could push the entire wall outward and/or out of plumb.** Try and plan for your cut forms to occur at the formed openings for windows and doors, whenever possible. This will minimize the amount of bracing required for cut forms. Keep all cuts aligned vertically as closely as possible, repeating the location of the cuts every other course. Fill the gap between forms with a foam adhesive.

✓ Curves and Special Angles.

PolySteel manufactures pre-molded 45° and 90° corner forms, however, you can create any shape or angle you desire by simply cutting the forms in the field. Please refer to Sections D.5 and D.6 of the Tips and Techniques section of this Manual for specific instructions on how to achieve a wide variety of curves and special angles.

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C.7.5 BRACE AND ALIGN CUTS.

Whenever a PolySteel PS•3000 Form is cut to accommodate a special size, it is weakened and may be unable to hold the pressure of poured concrete without additional bracing being applied to the cut. The most effective method of bracing these forms is to place a piece of lumber (plywood, OSB, etc.) across the cut and screw it to the attachment studs on both sides of the cut (See photo below). This is why it is beneficial to plan as many cuts as possible around formed openings, which will reduce the number of cut forms that require supplemental bracing.



Note: *If you have placed the first course of PolySteel on an un-reinforced footing, or if your seismic design requires it, install your first layer of horizontal rebar on top of the first course, before placing the second course of PolySteel Forms, and continue at 48" intervals, or as required.*

C.7.6 LINE UP THE STUDS.

The second course of forms will establish the running bond pattern for the rest of the wall. Start at the corner, using the opposite (Right or Left) corner used on the first course to establish the running bond. Use the foam adhesive or clips to secure the forms to the first course and make your cuts as needed to complete the wall. Be sure that you line up the attachment studs, indicated by the lines scored into the forms every 12 inches on center. **This will ensure that you have also lined up the vertical cores of the forms to maintain the structural integrity of the concrete posts formed every 12 inches.** Where two forms come together, you will also notice that there are two studs aligned side by side above a single stud below. This provides you with a full three-inch-wide attach point for finishes every other course.

- ✓ Once the first two courses are installed, mark the measurements of the cut forms on each course, which should repeat themselves throughout the remaining height of the wall, to speed installation.

NOTE: *It is not required that the forms are installed in a running bond. In fact, you may find instances where a running bond is not possible (e.g., tight corners, 45° corners, etc.). You may also wish to pre-panelize entire wall sections in advance of placing them on the footing, which requires a "stack bond" configuration (See Section D.11). A running bond does provide you with a more secure forming system when it is installed in the field and should be your first choice whenever possible.*